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ESSAY ON MEADOWS AND THEIR MANAGEMENT, AND THE CULTIVATION OF GRASSES, &c.

BY THE EDITOR OF THE AMERICAN FARMER.

(CONCLUDED.)

Having in the former part of this *essay* designated certain species of grasses for cultivation, in different soils, and for particular purposes, therein named, it seems but proper, that we should furnish to such of our readers as may not be acquainted with the characters of the several grasses recommended, such descriptions of their respective properties and habits, as will enable them to judge of their merits. To carry out our views in this respect, we shall abridge notices of each, with the exception of *Timothy*, from the works of Sinclair, and other reliable English authors: upon the subject of timothy we shall go into detail.

1, PHLEUM PRATENSE—TIMOTHY—MEADOW CAT'S-TAIL—HERD'S-GRASS.

By each of the above names this grass is known and designated in Great Britain. It is claimed in Mr. George Sinclair's great work, to be a *native* of that country:—it may be so,—though we doubt such to be the fact; for Mr. S. says, that it was recommended in the Annual Register of 1765, under the name of *Timothy*-grass, and states that it was said to have been brought from Virginia in 1763 by a Mr. Wynch, and that it received the "quaint" name of Timothy from Mr. Timothy Hanson, who first brought its seeds from New York to Carolina, and states that at that period it had a great character in America.

Whether *Timothy* be a native of Great Britain or not, we are not prepared to say positively; but that it is indigenous to the United States, there can be no question; *and as it is one of the most valuable hay-grasses* known to cultivation, we put in its claim to American nativity.

In the first volume of the old *American Farmer*, for March 1820, in a communication from the late Hon. *Timothy Pickering*, we find the following:

"The learned author of the treatise on agriculture, in Sec. II., published in your paper, discourses on grasses, mentions *timothy*, and says that in Europe it is called *Herd's-grass*, cat-tail, or *phleum pratense*, its botanical name; but as the plant is of *Yankee origin*, we have chosen to retain the Yankee denomination. Dr. Elliott of Connecticut, who in the last century, wrote several essays on field husbandry; in his third essay, printed in 1751, says,—"There are two sorts of grass, which are *natives* of the country, which I should recommend; these are *Herd's-grass*, (known in Pennsylvania by the name of *Timothy-grass;*) the other is Fowl-meadow, sometimes called Duck-grass, and sometimes Swamp-wire-grass.* It is said that Herd's-grass was first found in a swamp in Pisquataqua, Portsmouth, New Hampshire, by one *Herd*, who propagated the same." It is a fact, that it is now known among the farmers, generally, in Massachusetts, and I believe throughout New England, only by the name of *Herd's-grass*. From New London, I have supposed the seed was carried to Pennsylvania, and there or in the three lower counties, now the State of Delaware, being cultivated by a person whose sirname was Timothy, the grass received his name, and under that name was sent from Philadelphia to England. In such English books on Agriculture, as have fallen in my way, it is uniformly called *Timothy* or Cat's-tail."

In the April number of the same year, a correspondent in the same journal, under the signature of "R.," makes the following statement:

"For the introduction of *timothy-grass* into the State of Maryland, the farmers are indebted to *Timothy Hanson*, the father of Jonathan Hanson, who built the first grist mills on Jones' Falls, now forming a part of the city of Baltimore, about seventy years ago; and was the first person to bring this grass into cultivation. I believe Mr. Hanson was a native of the New England States. Whether he discovered the value of this grass growing in the neighborhood of his mill, or brought the seed on with him, I cannot say; but he had certainly the

*This is the red-top of Maryland.—Ed. Am. Farmer.

honor of introducing it to the public, and when it first came into *fashion*, it was called *Timothy Hanson's grass*, and sold in "Baltimore town" by that name."

It is not our purpose to contend that Maryland is the native place of timothy grass, but merely to insist that it is an indigenous grass of the United States; deeming it immaterial whether it sprung from a swamp of New Hampshire, and was first cultivated there by Mr. *Herd*, who appears to have christened it in the New England States, or whether its origin is to be traced to the former fertile meadows of Timothy Hanson on Jones' Falls, Baltimore. And here we may with propriety urge the fact, that this grass bears in England both its American names,—"Timothy?" and "Herd's-grass," as presumptive proof of its American origin, is, had it been a native of Britain, the inference is a fair one, that it would have been distinguished by a British name.

There is a *smaller* variety of phleum pratense mentioned by Mr. George Sinclair, which he says is a *native* of Britain, and doubtless is; but we think he claimed too much for Britain, when he attempted to appropriate our *timothy* to her also; and we fancy that he himself had some misgivings of the propriety of his appropriation; for notwithstanding its immense product, as demonstrated by his own experiments, the Yankee's "*Herd's-grass*" and the Marylander's "*Timothy*," found but little favor in his eyes:—notwithstanding, *in weight*, its yield exceeded that of all others, except *five*, out of ninety-four different kinds of grass; and that, when the seed was ripe, *it exceeded all in nutritive matter*,—we say, notwithstanding these valuable properties, he gave it but a qualified commendation, instead of giving it a hearty passport to the attention of his countrymen; so that even to this day, in England, it lays under the ban of undeserved neglect, and has not got into general cultivation; though, with the objection against it, of its want of *reproductive powers*, after being mowed, there is no grass superior to it, whether its product, or sustaining properties, be considered.

By the *Woburn experiments* the following are the estimated products of *timothy* at three different periods of its growth:

"Experiments—About the middle of April, the product from a clayey loam is,	5,445 lbs. per acre.
Grass, when in flower,	40,837 " "
When dry,	17,355 " "
Nutritive matter,	1,595 " "
At the time the seed is ripe,	40,837 " "
When dry,	19,397 " "
Nutritive matter,	3,668 " "
Produce of latter-math,	9,528 " "
Nutritive matter,	297 " "

Sinclair says:

"The culms of this grass at the time the seed is ripe contain more nutritive matter than those of any other species of grass that have been submitted to experiment. In regard to the production of early herbage in the spring, it is superior to the cock's-foot grass, (Orchard); the results of the experiments showed the quantity of grass to be equal in both plants; but the nutritive matter afforded by the grass of the meadow cat's-tail in the early part of the spring, was superior to that of the cock's-foot, in the proportion of 9 to 8. The value of the culms simply, exceeds that of the grass at the time of flowering in the proportion of 14 to 5; a circumstance which gives value to this grass above many others for the purpose of hay; as its valuable early foliage may be cropped to a late period of the spring without injury to the culms, which cannot be effected with those grasses which flower earlier in the season, without incurring a loss of nearly half the value of the crop, as has been proved by former examples.

Though there is more nutritive matter contained in the seed crop than in the flowering crop, nevertheless the loss of latter-math which would have been produced in the time the seed was ripening, would more than outweigh the superior quantity of nutritive matter contained in the grass of the seed crop. To the practical farmer this last observation (which likewise applies to every similar statement throughout these details) is, I am sure, unnecessary. If the season has been dry, this grass should be cut at the time of flowering; but in moist cloudy seasons it should be suffered to stand at least eight days after the period of flowering; in two days after this period it will accumulate more nutritive matter than it did in ten days previous to that stage of growth, provided circumstances do not interrupt the progress of vegetation, which the results of numerous experiments have proved.

This grass is very *deficient in the produce of aftermath*, and is slow in growth after being cropped: these *defects* take much from the merits above mentioned. It appears, therefore, to be unfit for cultivation by itself as an alternate husbandry grass; but of great value as a constituent of any mixture of grasses for permanent pasture, or the alternate husbandry, where it should always form a part."

It flowers in the third week of *June*, and ripens the seed in the end of *July*, (in England).

POA FERTILIS. FERTILE MEADOW-GRASS.

(Native of Germany. Perennial.)

Produce at the time of flowering from a sandy loam,	15,664 lbs. per acre.
Produce when dry,	6,653 " "
" Nutritive matter,	733 " "
" at the time the seed is ripe,	14,973 " "
" when dry,	8,235 " "
" Nutritive matter,	1,169 " "
" Rowen,	4,764 " "
" Nutritive matter,	111 " "

"In regard to early growth, this grass stands next to the meadow fox-tail, cock's-foot, and tall oat. The herbage is more nutritive than that of either of these grasses. * * I have found it to grow on almost every kind of soil, but it attains to the greatest perfection on a rich moist one. * * * It is one of those grasses that thrive best when combined with others. * * * * It adds much to the value of a sward from its nutritive qualities and powers of early and late growth. * * * * * From these facts and observations it will appear that Fertile Meadow-grass deserves a place in the composition of rich pastures, and ranks with the superior grasses."

It flowers in the beginning of July, and the seed is ripe towards the end of the month.

POA ANGUSTIFOLIA. NARROW LEAVED MEADOW-GRASS.

(Native of Britain. Perennial.)

Produce from brown loam—	
Grass in flower,	18,376 lbs. per acre.
When dry,	7,810 " "
Nutritive matter,	1,430 " "
At the time the seed is ripe,	9,528 " "
When dry,	3,811 " "
Nutritive matter,	701 " "

"The proportional value in which the grass, at the time the seed is ripe, exceeds that at the time of flowering is as 21 to 20. * *

Before the middle of April, the leaves attain to more than 12 inches in length, and are tender and succulent. * * * It contains more nutritive matter than the *poa pratensis*, or *poa trivialis*. Its spring produce is nearly double."

It flowers towards the end of May, and the seed is ripe towards the end of June.

FESTUCA PRATENSIS. MEADOW FESCUE.
(Native of Britain. Perennial.)

Product.		
Grass cut on 16th April,	10,890 lbs.	per acre.
" in flower,	13,612 "	"
" when dry,	6,465 "	"
Nutritive matter,	957 "	"
" at the time the seed is ripe,	19,057 "	"
" when dry,	7,623 "	"
Nutritive matter,	446 "	"

Mr. Sinclair says:—

"In point of early produce in the spring, this grass stands next to the *alopecurus pratensis* (meadow fox-tail), and is superior in this respect to the cock's-foot, (Orchard grass). It is eaten by horses, oxen and sheep, but particularly by the two first. * * The meadow fescue constitutes a very considerable portion of the herbage of all rich natural pastures. * * * It makes excellent hay, and though a large plant, the leaves or herbage are succulent and tender, and apparently much liked by cattle, as they never form rank tufts. * * * * Though essential for permanent pasture, it is not by itself very well adapted for the alternate husbandry, but should be combined with cock's-foot, (Orchard grass) ray grass and rough stalked meadow grass.

Flowers in June and ripens the seed at the end of July and the beginning of August."

Sole, thus briefly, though emphatically, gives the character of this grass:

"*Meadow Fescue*. Next in value to the Great Meadow-grass;—sweet, luxuriant, quick in growth, making rich pasture, and good hay."

LOLIUM PERENNE. RAY OR RYE-GRASS.
(Native of Britain. Perennial.)

Of this variety of Ray or Rye-grass there are said to be no less than 60 different varieties in Great Britain; 15 different kinds were cultivated in the experimental garden of *Woburn Abbey*, by Mr. George Sinclair, under the patronage of his grace the Duke of Bedford; and Mr. S. finding one of superior excellence, called it by the family name of his illustrious patron, "*The Russell's Ray-grass.*" After devoting considerable space in remarks upon *Pacey's* variety, he observes:—

"The following details will show to a certain extent the superiority of the new varieties.

1. *The Russell's ray-grass.* The produce on the 16th of April from a brown rich loam is 5,445 lbs. per acre; of nutritive matter, 212 lbs. At the time of flowering the produce is 15,654 lbs. of grass per acre; of nutritive matter 733 lbs.

The value of this variety, it is perfectly evident, is therefore greatly superior to the Pacey's ray-grass in produce and nutritive properties; and to these must be added its superior early growth in the spring, and its continuing to vegetate later in the autumn and winter.

2. *Stickney's* approaches near to this in its habits and nutritive properties.

3. The *Whitworth's* is finer in the foliage than either of the above varieties. This variety seems also to possess the valuable properties of early and late growth, in an eminent degree."

The product of the *Pacey* ray-grass on the 16th of April, on the same kind of soil, was 4,083 lbs. per acre. The product at the time of flowering, is not given in the work before us.

Ray-grass is a favorite in England, being always sowed combined with clover upon grain fields in the regular course of alternate husbandry, and for pasture, at the rate of 1 peck of seed per acre to 14 lbs. of clover.

Mr. *Sole*, an eminent English botanist, has these remarks upon its merits:

"Although this grass runs to all bents, yet its juice is said to be so concentrated in them, as to afford greater nourishment to a horse, than twice its quantity of common hay. [This, I fear, is considerably exaggerated; it is certainly not sustained by the analyses.] Horses are very fond of it, and it is highly favorable to their wind."

Donaldson, the author of an admirable work on *Grasses and manures*, says, that "so far as our knowledge extends, after all the investigations and best experience upon the subject, *ray-grass* forms the plant of all others the best suited for general purposes. For a crop of hay along of clovers, no other grass will afford an equal quantity and quality of produce on all the different variety of soils on which they are sown. It yields readily, and with much less comparative trouble, an abundance of sound, healthy seed, and is of certain growth; it rises early in the spring, and is much relished by all kinds of stock, the hay is good, and fetches a high price, and it is used with much advantage when sown in autumn along with other plants as spring feed for sheep."

Loudon says—"After all the experiments that have been made on the other grasses, none have been found to equal the perennial rye-grass for a course of mowing and pasturing for two, three, or seven years. It is sown in Italy, and especially in Lombardy, and also in France and Germany, along with clover for the same purposes as in England."

Von Thaer remarks,—"Though some have tried other species, both in these countries and in England, they have in the end returned to the Rye-grass. When intended as a pasture grass, if stocked hard, and when for hay, if mown early, the objections to it are removed."

These concurring opinions go conclusively to establish for it the claim of being a grass of superior merit, either for the purposes of alternate husbandry, for hay, or for pasture. We had a small patch of it in 1837, which we cut three times in the course of the season for soiling, and can bear our own testimony in its favor.

ANTHOXANTHUM ODORATUM. SWEET-SCENTED VERNAL GRASS.
(Native of Great Britain.)

Produce of Grass on 1st April,	3,488 lbs.	per acre.
At time of flowering,	7,827 "	"
When dry,	2,103 "	"
Nutritive matter,	122 "	"
At the time the seed is ripe,	6.125 "	"
When dry,	1,837 "	"
Nutritive matter,	311 "	"
Latter math-grass,	6,806 "	"
Nutritive matter,	239 "	"

This grass should be sown sparingly on meadows, as it is not a favorite with stock. *Sinclair* says:

"Its merits, however, in respect to early growth, continuing to vegetate and throw up flowering stalks till the end of autumn, and its hardy nature, sufficiently uphold its claims to a place in all permanent pastures. The superior nutritive quality of its latter-math is a great recommendation for the purpose of grazing, the stalks being of but little utility, as they are generally left untouched by the cattle, provided there be a sufficiency of succulent herbage.

It is said to give to new-mown hay that delightful scent which is peculiar to it; if it be not the sole cause of the fragrance, it certainly adds considerably to its sweetness. About the middle of April it comes into flower, and the seed is ripe about the first or second week in June."

We have heard it stated that the butter made in the neighborhood of Philadelphia, which is so much approved of, is indebted, in a great degree, to this grass, which abounds in the pastures in that vicinity, for its rich and delightful flavor.*

DACTYLIS GLOMERATA. COCK'S-FOOT-ORCHARD-GRASS.

(*Native of America, and of Britain.*)

Product 15th April. Grass,	10,209 lbs.	per acre.
When in flower,	27,905 "	"
When dry,	11,895 "	"
Nutritive matter,	1,089 "	"
Grass at the time the seed is ripe,	26,544 "	"
When dry,	13,272 "	"
Nutritive matter,	1,451 "	"
Latter-math,	11,910 "	"
Nutritive matter,	281 "	"

Mr. *George Sinclair*, says:

"If constantly kept closely grazed, it yields a greater profit than used in any other way, merely because the leaves grow rapidly and give a full bite. Oxen, horses, and sheep eat this grass readily. For the superiority of this over ray-grass, proved by an extensive cultivation of it, the agricultural world is indebted to the Earl of Leicester, who first persevered in the cultivation of it at Holkham."

Mr. *Arthur Young* says: "I should prefer it to almost any other grass; cows are very fond of it." He speaks, otherwise, in high commendation of it.

We come now to American authority, and shall introduce first of all, that eminent farmer and accomplished gentleman,

Col. *John Hare Powell*, whose judgment we would as lief confide in, as in that of any other agriculturist either in Europe or in America. He says:

"I have tried *orchard-grass* for ten years—it produces more pasturage than any artificial grass I have seen in America. There is some difficulty in "laying it down;" at least two bushels (of seed) per acre should be sown, together with the usual quantities of clover seeds, in the latter part of September, and should be lightly harrowed and rolled. It ought not to be depastured the first year, as cattle pull it out by the roots during the early stages of its growth."

The late Mr. *Thomas Cooper*, of New Jersey, who, in his day, was one of the most sagacious of American farmers, rates it above Timothy, and says it was gradually taking its place among the best farmers about Philadelphia.

Mr. *Lewis Sanders*, of Kentucky, an extensive breeder, and enlightened farmer, considers it the best of all grasses.

A correspondent of the old American Farmer, in the number for April 28, 1820, under the signature of "R.," says:

"That distinguished agriculturist, Mr. *Coke*, of Holkham, in Norfolk, England, is now cultivating orchard-grass extensively, in preference to the most admired grasses of that country, under the name of "*rough-cock's-foot.*" Seeing this grass highly recommended for its good qualities, I imported a few pounds of the seed, for trial, and found it to be nothing more than *our neglected orchard-grass*. The great drought of last summer has firmly established its reputation, and from a careful observation for many years, in growing it on rich, poor, low and wet grounds, I am fully convinced of its fine qualities for pasture, green food, or for hay, when cut early or mixed with clover. Horses, cattle, sheep, and hogs give it a decided preference. It is far more productive than timothy, remains without running out, and the soil never appears exhausted by its cultivation, in the slightest degree. "*Timothy Hanson's grass*" is otherwise, and is considered a great exhauster, when permitted to ripen its seed." * * "A few years ago, it was only sown in the shade, where it will succeed well; *but far better without protection in the sun.*"

Our own opinion of *orchard-grass* is, that for the purpose of alternate husbandry, to be sown either with or without clover, it has no superior, if an equal in the whole grass family, and that it has no superior for the combined purposes of grazing and for hay. As to the objection urged against *orchard-grass*, of its making coarse hay, we look upon it as altogether ideal; for if the grass be cut when in flower, it will not be so; and, if it be not then cut, as that is the fault of the grower, we regard the objection as not being a valid one. Again, it is said, that the culms when they get old will not be eaten by the stock, and we would ask, who is at fault here? Certainly not the grass; but the culturist, who neglected to put stock in sufficient numbers, and at the proper time, on his meadow, to eat and keep it down. Let the scythe do its part, when the grass is in flower, and let the horses, cattle, and sheep, be put on in sufficient numbers, at the right period, and there will be no hard stalks, or tufts, uneaten in the field.

POA PRATENSIS. *Smooth stalked* MEADOW GRASS. SPEAR GRASS. KENTUCKY BLUE GRASS.

(*Native of Great Britain, and of America.*)

Product. Grass in flower,	10,209 lbs.	per acre.
Grass when dry,	2,871 "	"
" Nutritive matter,	279 "	"
At the time the seed is ripe,	8,507 "	"
When dry,	3,403 "	"
Nutritive matter,	199 "	"
Latter math,	4,083 "	"
Nutritive matter,	111 "	"

This grass, according to the analysis of Mr. *George Sinclair*, does not compare favorably with many others; nor does he hold it, of itself, in very high estimation. He says:

"This species sends forth its stems but once in the year, and these being the most valuable for hay, though too small in quantity, it is on this account better adapted for pasturage than for the scythe. But upon the whole it is an inferior grass: * * its growth after mowing is slow; and its spring growth, though early, is inconsiderable; and upon the whole it is unfit to be introduced among the superior sorts."

[*For a full account of the virtues of this grass, see Dr. Emerson's letter in the note appended to this essay.]

And yet Mr. *Sole*, the distinguished English botanist, says of this very grass:

"The smooth-stalked Meadow grass—the Spear-grass of America"—[blue grass of Kentucky and Tennessee]—"*Poa pratensis*, is distinguished by its height, smooth stem, and creeping roots. *It is the best of all the grasses.* Its foliage begins to shoot and put on a fine verdure early in the spring, but not so soon as some other grasses. *Every animal that eats grass is fond of it; while it makes the best hay and affords the richest pasture.* It abounds in some of the best meadows in Great Britain, and has the valuable property of abiding in the same land, while most other grasses are continually changing. According to some, it delights in rather a dry than a moist soil and situation, on which account it keeps its verdure better in dry seasons, but it thrives most luxuriantly in rich meadows. A loss of more than one-fourth of the value of the whole crop is sustained if it is not cut until the seed be ripe, the straws being then dry, and the root leaves in a decaying and sickly state. Those of the latter math, on the contrary, are luxuriant and healthy."

There can hardly be two more opposite opinions; but from our knowledge of this grass, we are willing to endorse the character given to it by Mr. *Sole*.

In *New England*, it is cultivated under the name of "*Spear-grass*," and is there highly estimated for its hay and grazing qualities. In *Kentucky* it is cultivated for hay, and for pastures, and in both respects highly esteemed. Who have not heard of the Blue-grass pastures of Kentucky—of those pastures that have secured to her a nation's reputation as a grazing State? It is the same grass, too, that has given to *Tennessee* so distinguished a position as a breeder of noble animals.

Such is the excellence of this grass, that the graziers in the States named, shut up a field in early autumn, for the grazing of their stock in winter, which are often found obtaining their support from grass buried beneath a bed of snow; the instinct of the animals teaching them to get at the grass by scraping the snow from off it with their feet.

We saw late last September, a crop of aftermath, standing on three acres of Baltimore county bottom land, that was really refreshing to look upon—it was then fully 20 inches high, and presented a dense carpet of verdure, equal to any thing we ever beheld of the grass kind.

We would here observe, that there must be *Lime* in the soil on which Kentucky blue grass may be grown, or it will not prosper luxuriantly. If not naturally existing there, it must be artificially supplied. Give it a rich and calcareous soil, and it will give you a good crop of hay, and a pasture the remainder of the season, that will fatten your bullocks and mutton, and make your milch cows give fine flows of rich milk. In forming the *woodland-pastures* of Kentucky, many farmers there sow ½ a bushel of Blue grass seed, 12 lbs. of clover seed and 1 bushel of Orchard grass seed, per acre, and the same practice is pursued in Tennessee.

Festuca elatior, var. fertilis. Fertile seeded tall fescue.

According to Mr. *George Sinclair's* description, this grass is nearly allied to the common or barren seeded *festuca elatior*. This perfects an abundance of seed. It is equally early in the produce of foliage, and flowers earlier than the barren tall fescue by eight or ten days; the produce is equally nutritive. It comes into flower about the beginning of July, and the seed is ripe about the first week in August.

At the time of flowering, the produce from an acre of black sandy loam, incumbent on clay, was 54,450 lbs. Mr. S. does not give the quantity of nutritive matter, but as will have been seen above, says that it was equally nutritive as the barren seeded kind. The product of the barren seeded variety was 51,046 lbs. on an acre, and of nutritive matter, at time of flowering, 3,988 lbs.; so that this grass on a rich moist soil, must be truly valuable as a hay and pasture grass.

Alopecurus pratensis. Meadow fox-tail. (*Native of Europe, and of America.*)

Product—Grass in flower, (clayey loam,)	20,418 lbs. per acre.
When dry,	6,125 " "
Nutritive matter,	470 " "
At the time the seed is ripe,	12,931 " "
When dry,	5,819 " "
Nutritive matter,	461 " "

The rowen about two-thirds the crop when the seed is ripe.

Sinclair says: "It is the principal grass in all rich natural pastures, it should always form one-eighth of any mixture of seeds used for that purpose. Its merits demand this preference, whether with respect to early growth, produce, nutritive qualities, or permanency.

It flowers in April, May, and June, according as it may have been depastured earlier or later. Seed ripens in June and July, according to the season of flowering. Cut on the 12th of April, it yielded 9,528 lbs. per acre."

Of this grass, Mr. *Sole* speaks thus:

It is "excellent, either for pasture, or hay, and very productive;—one of the best dairy grasses."

Festuca duriuscula. Hard fescue. (*Native of Great Britain. Perennial.*)

Product. Grass—in flower, light sandy loam,	18,376 lbs. per acre.
When dry,	8,269 " "
Nutritive matter,	1,004 " "
At the time the seed is ripe,	19,075 " "
When dry,	8,575 " "
Nutritive matter,	446 " "
Rowen,	10,209 " "
Nutritive matter,	199 " "

Upon the above data Mr. *G. Sinclair* remarks:

"The above details confirm the favorable opinion which most writers have expressed respecting this grass. It is most prevalent on light rich soils; but it is also found in the richest natural pastures, where the soil is more retentive of moisture, and is never absent from irrigated meadows that have been properly formed. It appears to be one of the best of the fine, or dwarf growing grasses, which are best adapted for the food of sheep. * * It springs rather early, and the produce is remarkably fine and succulent. *It withstands the effects of severe dry weather* in rich natural pastures better than many other grasses. This property, joined to its merits above mentioned, entitle it to a place in the composition of the best pastures."

It flowers about the middle of June, and ripens the seed in the third week in July.

Mr. *Sole* speaks in the following strong terms of this grass. He says it is

"Of delightful verdure;—affords rich pasture, the finest hay, and grows from three to four feet high."

POA NERVATA. NERVED MEADOW GRASS.
(*Native of America. Perennial.*)

Product. At the time of flowering—rich sandy loam,	21,780 lbs. per acre.
Latter math,	9,528 " "

Of its qualities, Mr. *Geo. Sinclair* says:

"The crops of this grass, at the time of flowering, and at the time the seed is ripe, are equal in point of quantity and nutrient quality, a circumstance which has not occurred in any other grass mentioned in this series of experiments. The nutritive matter contained in the latter-math is likewise greater than in most other grasses. * * * This grass is remarkably hardy. In February 17, 1814, after the severe winter preceding, this species of *poa* was perfectly green and succulent, while not one species of grass, out of nearly three hundred different species that grew around it, remained in a healthy state, but were all inferior and more or less injured by the severity of the weather. In the following season, the produce rather exceeded the above, though it had been mowed the preceding season, and no manure had been applied. * * * Farther experience in the cultivation of this grass enables me to state, that it possesses very valuable properties, and that it will be found a valuable ingredient in permanent pastures, where the soil is not too dry, but of a medium quality as to moisture and dryness."

It flowers in the third week in June, and the seed is ripe in the last week in July.

CYNOSURUS CRISTATUS. CRESTED DOG'S-TAIL.
(*Native of Great Britain. Perennial.*)

Produce—Grass in flower,	6,125 lbs. per acre.
When dry,	1,837 " "
Nutritive matter,	406 " "
At the time the seed is ripe,	12,251 " "
When dry,	4,900 " "
Nutritive matter,	478 " "

Of this grass Mr. Sinclair says:

"The leaves are rather slow in growth, are short, but form a dense turf; hence the weight of grass when the seed is ripe is greater than at the time of flowering; but contains proportionally less nutritive matter. It is, therefore, inferior for the purpose of hay, but admirably adapted for permanent pasture. The roots penetrate to a considerable depth in the ground, from which circumstance *it continues green after most other grasses are hurt by a continuance of dry weather.* Mr. Curtis observes, that it affects a dry soil, and that it will not thrive in meadows that are wet; but I have always found it more abundant in moist, or rather tenacious elevated soils, than in those of a drier and more sandy nature. * * In some parts of Woburn park, this grass constitutes the principal part of the herbage on which the deer and South Down sheep chiefly browse." * * * Again, he says:

"From these facts it is evident that a sward of the best quality, particularly under circumstances where sheep are a principal object, cannot be formed without an admixture or proportion of the Crested dog's-tail grass. In all the most celebrated pastures I have examined, it constitutes a very considerable portion of the produce."

It flowers towards the end of June, and ripens the seed towards the end of July.

Mr. *Sole* thus strikingly pronounces its virtues:

"An upland and park grass, very fine, and good both for pasture and hay."

FESTUCA OVINA HORDEIFORMIS. LONG AWNED SHEEP'S FESCUE.
(*Native of Great Britain.*)

Produce. Grass at time of flowering,	13,612 lbs. per acre.
Of latter math,	5,445 " "

Of this grass Mr. Sinclair says:

"Its nutritive qualities are nearly the same as those of the *festuca duriuscula.* It is superior to that species and to most others in the produce of early herbage in the spring; the herbage is very fine, tender, and succulent. It is highly superior to the *festuca ovina*, of which it is considered a variety," and adds, that it is entitled "to a place in the composition of the best pastures."

It flowers the last of May, and ripens its seed in June.

FESTUCA RUBRA. PURPLE FESCUE.
(*Native of Britain. Perennial.*)

Product. Grass in flower,	10,209 lbs. per acre.
When dry,	3,557 " "
Nutritive matter,	239 " "
Grass at the time the seed is ripe,	10,890 " "
When dry,	4,900 " "
Nutritive matter,	340 " "
Latter-math,	3,403 " "
Nutritive matter,	79 " "

This grass affects arid sands, and hence its value on such soils, in the composition of a sheep pasture, on such land.

In a paper prepared by Mr. *George Sinclair*, at the request of Sir *John Sinclair*, as to the grasses best adapted to particular locations and soils, the former, in speaking of *Festuca durtuscula*, Hard fescue,—*Festuca cambrica*, Welsh fescue—*Festuca ovina hordeiformis*, Long-awned sheep's fescue, and *Festuca glabra*, Smooth fescue, ranges the four species under the same general head, and remarks thus:

"These four species of grass are very similar in their habits, but differ as to their comparative value for agricultural purposes. *One valuable property is common to all, the power of withstanding the bad effects of drought.* In this respect they are superior to any of the grasses before named, and being nutritive, succulent, and forming a close turf, one or other of them is essential as an ingredient in the composition of a pasture of the first quality. The first mentioned is common to all rich natural pastures and irrigated meadows of the best quality. It keeps its place in rich soils, in company with grasses of large growth, where it assists greatly in forming a close bottom; but on sandy soils and down lands, it is of great value, as it thrives well in such situations, and is less injured by the extreme of hot dry weather than most other grasses."

From the whole tenor of the descriptions given in the works which we have consulted, the *festuca* grasses appear to be peculiarly adapted to pastures intended for sheep, as they affect high, dry soils, and possess the property of resisting the baleful influence of droughts, which prove so destructive to so many of the families of the grasses; and while they are so distinguished by this essential quality, several of them are good hay-grasses, thus assuring supplies of provender throughout the year.

Mr. *Sole*, in summing up the general character of the several species of fescue grasses, states, that they are all "*celebrated for feeding mutton and venison*—the predominant grass of downs, and the fittest for bowling-greens and lawns."

FESTUCA OVINA. SHEEP'S FESCUE.

Product. Grass at the time the seed is ripe,	5,445	lbs. per acre.
Nutritive matter,	127	" "
Latter-math,	3,403	" "
Nutritive matter,	66	" "

Of this grass Mr. Sinclair says:

"From the trial that has here been detailed, the Sheep's fescue does not prove to possess the nutritive powers generally ascribed to it. It has the advantage of a fine foliage, which is succulent, and may, therefore, very probably, be better adapted to the masticating organs of sheep than the larger grasses, whose nutritive powers are shown to be greater. Hence, on situations where it naturally grows, and as pasture for sheep, it may possibly be inferior to none on the same soil in the like state of nature."

Flowers in June—ripens seed last of July.

Sole says, it is "*celebrated for feeding mutton and venison.*"

FESTUCA CAMBRICA. WELSH FESCUE.

(*Native of G. Britain. Perennial.*)

Product. Grass at time of flowering,	6,806	lbs. per acre.
Latter-math,	6,125	" "

This grass springs early, rises well after being cropped, is hardy, and is eaten freely by sheep.

AGROSTIS VULGARIS. RED-TOP.

(Native of England and America.)

Produce at time of flowering, is	10,209	lbs. per acre.
" " latter-math, is	2,722	" "

Of this grass Sinclair remarks:

"The Common bent (Red-top) is one of the earliest of the bent grasses, in this respect it is superior to every other of this family, but inferior to several of them in the quantity of produce it affords, and the nutritive matter it contains. It is the most common grass on naturally sandy pastures, and even on more tenacious soils, that are elevated and exposed, it is frequent.

Nutritive matter from an acre, 501 lbs."

The above statements of product, and analysis of nutritive matter, do not present the Red-top grass in a very favorable light. But from our personal knowledge of its growth in *this country*, of which it is a *native*, as well as of Great Britain, we have no hesitation in saying, that it grows much more luxuriantly here than there, and that we believe its nutritive properties are much more highly developed under the happier influence of our more genial sky. We hold it to be a most valuable grass, either for pasture or for hay. It possesses the desirable property of flourishing alike in the North, and in the South. The most serious objection against it, arises from the creeping nature of its roots, which unfit it for purposes of alternate husbandry; but this objection does not rest, where it may be sown on land intended to be devoted to a meadow for a series of years. In such location, it will form a valuable adjunct in any combination of grasses, as besides being a most excellent hay grass, it is altogether a reliable one for early and late grazing; and when properly stocked, and kept from throwing up its culms, is well relished by every description of stock; and, from our experience of its effects upon the condition of animals feeding on it, it has proved itself to be very nutritious.

It affects moist situations most, and will come in, spontaneously, upon cleared and drained bogs; but its affinities are not alone confined to such soils; for we have seen it spring up, and grow with great luxuriance on elevated clay, and elevated sandy clearings. This character of adapting itself to high and low grounds—to dry and moist ones—in our view, adds much to its value, as does the fact, that it prospers irrespective of the effects of a southern or a northern sun. These properties, together with its powers of reproduction, commend it most strongly to our favor.

HORDEUM PRATENSE. MEADOW BARLEY GRASS.

(*Native of Great Britain. Perennial.*)

Product. Grass in flower,	8,167	lbs. per acre.
When dry,	3,267	" "
Nutritive matter,	478	" "

The Rev. *G. Swayne* says of this grass:

"I have observed this grass to constitute the principal herbage of one or two pastures that were considered excellent for sheep. I have been informed, likewise, that in some pastures in Norfolk, this grass forms the principal herbage; and the proprietors of the lands in question are famed for their superior breed of sheep."

AVENA PUBESCENS. DOWNY OAT GRASS.

(*Native of Great Britain. Perennial.*)

Product. Grass in flower, rich sandy soil,	15,654	lbs. per acre.
When dry,	5,870	" "
Nutritive matter,	366	" "
At the time the seed is ripe,	6,806	" "
When dry,	1,361	" "
Nutritive matter,	212	" "
Latter-math,	6,806	" "
Nutritive matter,	212	" "

Mr. G. Sinclair says:

"This is one of those grasses which never thrives when cultivated by itself; it requires to be combined with other grasses to secure its continuance in the soil, and to obtain its produce in perfection." * * "It affects most a calcareous soil, and that which is dry. It grows naturally, however, in almost every kind of soil, from the lime-stone rock to the irrigated meadow; it is always present in the richest natural pastures. * * * If the land be elevated and without good shelter, this grass becomes more valuable, as it thrives better under such circumstances than most other grasses, and sheep eat it as readily as they do most others."

Flowers in July, and ripens its seed in August.

The above are all of the grasses, proper, spoken of in this paper, and we shall now proceed to speak of the other plants named.

VICIA SEPIUM. BUSH VETCH.

(*Native of Britain. Perennial.*)

Product. 16th April from sandy-loam,	5,445	lbs. per acre.
Latter-math,	6,806	" "

"In the Memoirs of the Bath Agricultural Society, the Rev. *G. Swayne* informs us, that the *Bush Vetch* shoots earlier in the spring than any other plant eaten by cattle; vegetates late in the autumn, and continues green all winter." * * * "A patch sown in drills in a garden was cut *five* times in the course of the second year, and produced at the rate of *twenty-four tons on an acre*, of green food, and when dry would weigh nearly four tons and a half.

Mr. G. Sinclair says:

"The nutritive matter of this vetch consists almost entirely of mucilage and sugar; the bitter extractive principle which exists in the nutritive matter of the leaves of all grasses, is here in less proportion. The produce in those experiments is less than that obtained by Mr. Swayne, but the dif-

ference is to be accounted for from the different soils employed. * * * Horses and oxen are very fond of it."

Flowers middle of May. Seed ripe middle and end of June.

TRIFOLEUM REPENS. WHITE CLOVER.

As our readers are familiar with this plant, it would be superfluous to describe it, and shall content ourself by saying, that, in the formation of meadows in Great Britain, a few pounds per acre are always sown.

LOTUS CORNULATUS. BIRD'S-FOOT TREFOIL.

(Native of Britain. Perennial.)

Produce at the time of flowering, clayey-loam, 10,209 lbs. per acre.

Dr. Anderson, Mr. Curtis, and Mr. Woodward recommend this plant for cultivation.

Mr. George Sinclair remarks:

"Mr. *Woodward* informs us that it makes extremely good hay in moist meadows, where it grows to a greater height than the trefoils, and seems to be of a quality equal, if not superior to most of them. Professor *Martyn* observes, that, in common with several other leguminous plants, it gives a substance to hay, and perhaps renders it more palatable and wholesome to cattle."

It is partial also to dry soils.

POTERIUM SANGUISORBA. BURNET.

The author of the *New British Farmer's Calendar*, says of this plant, that it succeeds on almost any but strong clay soils." * * "I think it advantageous to mix burnet with ray-grass and white clover, not only with the view of securing a good bottom, but to render the herbage more palatable to cattle in general. * * * No small inducement (to sowing it) is that they (the cattle) are fed with it when no other grass is to be obtained. Of its salubrity there is no question, and even its medicinal virtues are confidently spoken of, particularly for sheep suspected of unsoundness."* * * "Upon lands proper for it, with judicious management it will afford pasture even in January. It receives less injury from frost than any other herbage, and will even grow in the winter months, provided the weather be not too severe. If shut up in April, it may be mown at midsummer, after which it must be reserved for feed until January or February. Like Lucerne, it defies the drought in summer, which makes it valuable in another point of view."

Of *Trifolium pratense.—Red Clover*, it is unnecessary for us to say a word to our readers, as they are all familiar with its many virtues as a sustainer of all kinds of stock, and as an improver of the soil. We will, however, reiterate the truths we have often before advanced—that *Lime* must be present in any soil in which clover may be cultivated—that, if it does not naturally form a constituent element of the soil, the deficiency must be supplied, as it is useless to attempt to cultivate it on any soil wherein the calcareous principle does not exist.

In drawing our essay to a close, we desire to impress our readers with the importance of *cutting their hay at the right time.* In the preceding part of this paper we advanced the opinion, that when grasses come into flower was *that time*, and after giving our own views in support of that opinion, we entrenched ourselves with those of others. Since then, professor *J. F. W. Johnston's "Elements of Agricultural Chemistry and Geology"* has come into our hands, from which we take pleasure in copying the following highly conclusive paragraphs:

"The period at which hay is cut, or corn reaped materially affects the quantity (by weight) and the quality of the produce. It is commonly known that when radishes are left too long in the ground they become hard and woody—that the soft turnipy stem of the young cabbage undergoes a similar change as the plant grows old,—and that the artichoke becomes tough and uneatable if left too long uncut. The same natural change goes on in the grasses which are cut for hay."

"In the blades and stems of the young grasses there is much sugar, which, as they grow up is gradually changed into starch, and then into woody fibre. The more completely the latter change is affected—that is, the riper the plant becomes—the less sugar and starch, both readily soluble substances, they contain. And though it has been ascertained, that woody fibre is not wholly indigestible, but the cow for example, can appropriate a portion of it for food as it passes through her stomach; yet the reader may readily imagine, that those parts of the food which dissolve most easily, are also likely—other things being equal—to be the most nourishing to the animal."

"It is ascertained, also, that the weight of hay or straw reaped, is actually less when allowed to become fully ripe; and therefore, by cutting soon after the plant has attained its greatest height, a *larger quantity*, as well as a *better quality* of hay, will be obtained, while the land also will be less exhausted."

In conclusion, we be would permitted to express the hope, that our essay may be instrumental in awakening the agricultural mind to reflection, and through reflection, to action—*to that kind of action*—which will influence proprietors of farms and plantations, to provide their several estates with such meadows as may correspond with their dimensions, and with their wants and necessities, respectively.

NOTE UPON THE ANTHOXANTHUM ODORATUM—SWEET SCENTED VERNAL GRASS.

In the account we have given of this grass, we alluded to the influence which it is said to exert on the butter made in the neighborhood of Philadelphia,—we, therefore, take great pleasure in appending the following highly interesting and satisfactory letter upon the subject, addressed by Dr. *G. Emerson*, of Philadelphia, to the Commissioner of Patents:

PHILADELPHIA. Oct. 31, 1849.

SIR: I wish to invite your attention to a subject relating to pasturage and the products of the dairy. It has already been laid before the public, but this so partially and imperfectly, that it will still be found by most pesons invested with novelty, and, as I believe, fraught with important bearings upon agricultural interests.

Philadelphia butter enjoys a widely extended reputation for its peculiarly high yet delicate flavor, well known to all who have had opportunities of tasting it. Good butter produced in this vicinity is always to be found in the Philadelphia market, but it is only during the spring that it possesses in greater perfection that delicious flavor to which I here particularly refer. This superior flavor, like that distinguishing the Epping and Cambridge butter of the London market, has been very naturally ascribed to something eaten by the cows producing it. But what this *something* is, has been a subject of vague speculation, and never yet defined or speci-

fied so as to enable persons in other localities to avail themselves of it for the improvement of their own pastures and dairy products.

Extensive observations and many experiments, made and continued through many years, have convinced me that the proximate source of the high flavor of our Philadelphia May butter is the *sweet-scented vernal grass*, abounding in the old pastures, fields and meadows of the adjacent counties. Some of the facts and reasons upon which I found this conclusion are the following:

1st. In the dairy region around Philadelphia the sweet-scented vernal grass, with its peculiar vanilla-like fragrance, constitutes the predominant spring herbage on all the pasture fields and meadows left several years unplowed. The longer the pastures have been left unbroken, the greater the proportion of vernal grass, and the higher the flavor of the butter produced from the cows fed upon them. Many of the meadows and pasture fields have remained ten, twenty, thirty, and more years unbroken by the plow. In such cases the sweet-scented vernal grass affords almost the exclusive spring herbage.

2d. The high flavor continues in the butter during the development of this grass, and invariably declines with the maturing of the seeds, after which the stems become dry and hard, and the cattle push them aside, in search of fresher and greener herbage.

3d. The sweet-scented vernal grass is shown by chemical analysis to contain an aromatic essential oil, of which *benzoic acid*, or flowers of benzoin, is the base.

This aromatic principle is abundant, and can be readily obtained by distillation, furnishing a delightful perfume and source of flavor. As the milk of all animals is so very susceptible of acquiring disagreeable tastes from substances eaten, such as garlic, turnips, &c., it is natural to infer that it may likewise be imbued with agreeable flavors, when the proper agents for such a purpose are presented in the food.

4th. That the *benzoic acid* is the principal agent in producing the peculiarly agreeable flavor of butter made from pastures abounding in the sweet-scented vernal grass, I have rendered probable, if not a demonstrated fact, by several experiments in which the flowers of benzoin given to cows imparted to the butter made from them the characteristic flavor. In such cases 20 or 30 grains of the benzoin were given twice a day, previously dissolved in hot water, which was stirred into some flour or meal, and then mingled with the customary mess. The cows receive not the slightest injury from this or even a much larger quantity of the benzoin.

The sweet-scented vernal grass, called by botanists *anthoxanthum odoratum*, is a native of Europe, from whence, at an early period of our settlement, it has doubtless been introduced into the vicinity of Philadelphia, its seeds having probably been blended with those of other grasses. It has been long naturalized, and now disputes the right of soil with the common green grass, and never yields possession, but becomes more and more predominant until the sod is destroyed, after which it clings to the borders of the field, along the fences and hedge-rows. When, after a rotation of grain crops, the ground is left undisturbed by tillage to be again covered by greensward, the vernal grass appears, springing from the old seed left in the earth. Though seldom sown designedly in this part of the United States, it is often sown in England, where it constitutes a part of the growth of the most permanent pastures, growing in nearly every kind of soil, but attaining its greatest perfection on the deep and moist, loving shady places, such as the skirts of the woods. The sweet odor by which English hay is often distinguished, is chiefly derived from an admixture of vernal grass. Although, when alone, it is not distinguished very highly as a hay grass, still its early growth and hardiness, with the superior nutritive properties of its aftermath, give it high claims in the composition of all permanent pastures. In England it comes into flower about the middle of April, and in southern Pennsylvania about the middle of May, the seed ripening in both countries about the second week in June. It is worthy of remark, that in the moist climate of England this grass continues throwing up flower-stalks till the end of autumn, while in Pennsylvania the efflorescence is confined to spring. As the development of the aromatic qualities is mainly confined to the period of efflorescence, this fact may explain why the period of highest flavor in Philadelphia butter is so limited.

The question might be very naturally asked: If the sweet-scented vernal grass communicates to spring butter the high and delicious flavor we have referred to, why is not this flavor imparted in winter when cows are fed on cut hay from meadows known to contain this grass? The answer I would give is as follows: The principal and almost exclusive hay-grass of our section of country is timothy, which, with red clover frequently combined, matures and is mown long after the sweet-scented vernal grass has dried its stalks and lost its distinguishing fragrance. Could the vernal grass be sown alone, or blended with other grasses at the same time, and the hay all mown at the stage of perfect efflorescence and highest fragrance, there is little doubt that butter made from cows fed upon it would manifest more or less of the fine flavor at other times than in the spring. I think it proper to remark that the milky products of cows fed on pastures where the sweet-scented vernal grass abounds, instead of always possessing a delightful flavor, are sometimes found imbued with a most disagreeable one, proceeding generally from weeds so often existing in pastures. In southern Pennsylvania, garlic, and especially that nauseous and troublesome plant commonly called the "ox-eye daisy," a species of wild camomile, (*Chrysanthemum leucanthemum.*) are very often nipped by the cows when the herbage is short or scarce. In such cases all the agreeable qualities that might otherwise have been derived from the vernal grass are not only neutralized, but overpowered by the disagreeable tastes imparted by the bad company with which it is associated. I consider the sweet-scented vernal grass worthy the attention of all farmers desirous of possessing the means of obtaining butter and other dairy products in the highest perfection, and of having in their fields and meadows one of the earliest, if not the very earliest pasture grass known.

But to these advantages, great as they are, may, I think, be added others of no small importance; one of which is the capacity to confer a fine flavor upon the meat of stock grazed upon a species of herbage fraught with a high aromatic principle. Such advantages have, from time immemorial, been the inheritance of people in certain localities, where they were originally indebted for them to chance, as for example with those residing in the vicinity of Philadelphia, few if any of whom are aware that

there exists in their pastures any grasses not common to those of other places. To identify the immediate agent from which such advantages are derived, is to remove them from the uncertain control of accident, and place them at once at the disposal of all.

A description of the grass, the merits of which I have been describing to you, may be found in the Farmers' Encyclopædia, (Philadelphia edition for 1850,) under the head of *Anthoxanthum Odoratum*, figured in plate 6, *a*. Very respectfully,

G. EMERSON.

Note.—In a note in Sir Humphrey Davy's Agricultural Chemistry, it appears that "in the experiments made on the quantity of nutritive matter in the grasses, cut at the time the seed was ripe, the seeds were always separated, and the calculations for nutritive matter, as is evident from the details, made for grass and not for hay." This does not interfere with the force of the reasoning as to the propriety of cutting the grass when in flower.

WORK FOR THE MONTH.

MAY.

This is a delightful month—its beauties have challenged to their praise, the genius of many a poet—but it is one which requires the exercise of all the energies the agricultor can command—whoever else may have a holiday—whoever else may take his recreations during this month, there are none for those engaged in the cultivation of the earth. With them all should be action—well directed, timely action. So varied are the things to be attended to—so great the amount of labor crowded into one "little month;" that, imitating the patient example of the bee, he must be *busy* all the time, if he expects to fill his hives with honey. And here let us press upon all, the propriety of abstaining, while they are *busy*, from ever permitting themselves to be *hurried*. We never yet saw a farmer who was always in a fluster and hurry, that ever made much headway. Give us the one who, having judiciously conceived his plans of operations, carries them out noiselessly, patiently, and carefully, and we will show you the man, who does twice as much—who does it twice as well—as he who, always under the influence of that excitement which partakes of the character of a "storm in a teapot," makes much noise, but to little effect—for he is forever beginning something, but never perfecting any thing as it ought to be.

Let us go now and see what is to be done

ON THE FARM.

Corn planting.—As this work is performed during this month in several of the states, we sincerely hope that all have been sufficiently attentive to their interests to have, before this, manured their corn ground heavily, ploughed it deep and well, and harrowed and rolled it until they have it of fine tilth, as all these are essential elements to the growth of a crop. Assuming that the ground has already been put in the best possible order, we advise all to put their every energy into requisition, and get their corn planted by the 10th of this month, the nearer the first the better.

Top-dressing.—It is always favorable to the early growth of the corn-plant, to treat each hill with a small handful of a rich mixture, either at the time of dropping the corn, when it first comes up, or at the first working. 5 bushels of ashes, 1 bushel of plaster, and 10 bushels of rich mould or rotten dung, the whole to be thoroughly mixed together. Such topical applications tend to encourage the plants to a vigorous early growth, a circumstance that exerts a salutary influence upon their subsequent progress.

For fuller views upon this subject, we refer to our directions of last month—and will content ourself here, by enjoining it as a duty, to keep the corn-field clean from beginning to end.

Oats.—This crop should now be some inches above ground; but if you have not yet got yours seeded, you may still sow, provided you do so by the 7th or 10th of the month, though we cannot promise you as good a crop, as you would have had, had you sown a month ago; as, except under peculiar conditions of the weather, the late sown do not yield as much grain as the early. As to the mode of growing oats, we feel that we cannot do you a greater service, than by referring to our remarks in the March number.

Pumpkins.—This is a crop that we would like to see patronized by every agriculturist; not so much, because it is a profitable vegetable to grow, as because it secures to milch cows so much, and such excellent food—and because, when properly fed to them, it encourages the secretion of rich milk; because the cream yielded by the milk makes such delicious, golden, hard, nutty butter. We confess we have great sympathy for milch cows; have long struggled to see them cared for in a christian spirit; and so long as we may be spared, and able to wield a pen in their behalf, we shall do so, as we look upon them as the most generous creatures on a farm—as creatures whose usefulness should commend them to our kindliest treatment.

Get in your pumpkins the first week in the month; be sure to put in a *big* patch, if you plant them in that way—and, if in your corn-field, be as sure to have enough of them, as while they are among the best food for milch cows, they are excellent to commence the fattening of hogs upon; so, also, for feeding beeves, and as all New England men know, make capital pies, *when they have plenty of good things in them.*

Give to each hill of pumpkins a heaping shovel full of strong manure, keep them clean, and the *striped bug* away, and if the weather allow of it, they will yield largely. And, by the bye,—that same striped bug is a very ugly customer among pumpkin vines, unless they are carefully watched and destroyed. The best way to get rid of them is, to *catch* and *kill them.* The next best, is to form a mixture of one bushel of ashes, ¼ bushel of plaster, 1 peck of soot, 1 lb. flour of sulphur and 1 lb. of scotch snuff, mix the whole well together, go every morning, until the bugs disappear, while the dew is on the vines, and dust them freely. All the bugs you find on your hills, while dusting, kill, or drown in a piggin of water.

Millet.—If you have no hay-meadows, or they have yielded a short crop, and you lack a supply of provender, manure a few acres of rich, deep loam, heavily, plough, and harrow them until you have them perfectly pulverized, then sow thereon, four pecks of millet seed per acre, harrow it in lightly, and roll.

If you wish to grow it for its seed or grain, 2 pecks will be enough.

Time of sowing.—Any time during the month—the earlier the better.

Time of cutting.—If for *hay*, cut when the grain at the top first begins to turn yellow: if for *grain*, when one-half of the grain has become yellow.

Mode of curing.—If for *hay*, let it lay in the

swarth from 5 to 6 hours, to wilt, then put it up into cocks of, say 50 lbs. each, next morning when the dew is off, turn the cocks over, permit them to remain an hour in the sun, then put four cocks into one, and in a day the hay will be sufficiently cured to be stacked, or stowed away in the barn. As you put it away, strew over every ton a peck of salt.

If for *grain*, cut, tie into bundles, and stook as you would wheat or any other grain.

If the *cocks* in which you cure it are properly made, the hay will not be injured by rain; the first crop we ever grew was exposed to a steady rain of a week's duration, without being injured: it came out of the cocks perfectly green and fragrant, only putting us to the additional trouble of spreading and drying it.

The grain, when chopt and mixed with cut hay or straw, makes an excellent alterative food for horses—if made into slops for milch cows, it increases their milk—thus prepared, hogs relish and thrive upon it, while for chickens, young or old, fed in the grain, it is equally good.

Quantity of hay per acre.—Grown upon good soil, liberally manured, and thoroughly prepared, it will yield from 3 to 4 tons.

Quantity of grain per acre.—Under like favorable auspices, from 25 to 40 bushels of grain may be raised.

It is an excellent preparatory crop for timothy. Where the ground has been heavily manured, deeply ploughed, and thoroughly harrowed for the millet crop, after that has been cut and removed, all you have to do, is to harrow the millet stubble twice, sow your timothy seed, harrow and roll. There is no better cleanser of the ground from weeds than millet.

Root crops.—If not done before, *Parsnips*, *Carrots*, *Sugar Beets*, and *Mangel Wurtzel*, should be sown early this month—the earlier the better. For the mode of culture, see our directions of last month. Whatever else you may neglect, don't neglect to drill in some acres of these roots for your stock.

In speaking of the value of *Carrots* and *Parsnips* as food for *horses*, Stephens, in his "Farmer's Guide," pages 335, 336, has the following remarks:

"A method of feeding harness horses is practised by Mr. R. G. Durham, Turnham Green, London, on his omnibus horses. They are now partly fed on carrots, instead of wholly on oats as formerly, and the results deserve the attention of the farmer, in supporting his own saddle horse. Mr. Durham observes:—"I make bold to offer to the keeper of horses a plan which I have successfully practised for the last three years, to save a large consumption of oats; and having had the management of 200 horses belonging to the Hammersmith Conveyance Company, I can confidently state that the plan is not only a great saving in expense, but is in the highest degree conducive to the health, and the development of the capabilities of the horse. In autumn I lay in a sufficient store of white or red carrots, (white preferred,) to last till the spring, and from every stud of 8 horses I deduct from their daily allowance of *oats*, (which is 4 bushels, or 132 lbs.,) 1 bushel or 38 lbs. in place of which I substitute about 72 lbs. of carrots sliced thin, and saving one bushel of oats in every stud per day. a ton of carrots being equal to 4 quarters of oats [32 bushels.] Now, taking the number of horses working in omnibusses round London at 8 per omnibus, and the number of of omnibuses at 1,400, the saving in the consumption of oats by omnibus horses only would be 1400 bushels, or 175 quarters per day. But almost all descriptions of horses do well upon this food. Blaine, in his *Veterinary art*, says of carrots, that "agricultural horses may be supported on them wholly, when sliced and mixed with chaff; the sweet *parsnip* has similar properties, and may be used with almost equal success; and the Swedish turnip has proved an excellent food, the sugar predominating in all these to an eminent degree, and he adds, but carrots stand foremost, and hardly too much can be said on their excellent qualities. They appear particularly favorable to condition, as the skin and hair always look well under their use; they are highly nutritious, and so favorable are they to the fine exercise of the lungs that horses have been found even to hunt on them, and in conjunction with a certain portion of corn, would form as good a food as could be desired for our coach and machine horses and our hackneys." And further on he states, 'that in very many cases of horses in fair work, carrots may be wholly substituted for corn, provided the quantity be doubled or trebled—and with additional advantage to the health and condition of the animals.'"

Lucerne may be sown at any time between the 1st. and 15th of this month.

Canteleupes, Musk, and Water Melons.—Plant these the first week in this month—no two kinds to be planted within 3 or 400 yards of each other. A mixture of 7 parts rotten dung and 1 part ashes, forms an excellent compost for them—to which they should be liberally treated.

Field Peas and Field Beans, should be planted early this month. While you are planting, don't forget to put in an acre or two of the Black Dwarf, Mexican, or Brazilian black bean, as without comparison it is the most luscious of the Bean tribe. Soup when made from them, according to the *recipe* in Vol. 3, page 390, is one of the best dishes ever eaten—equal to the best turtle soup—infinitely better than nine-tenths of the soup made and sold under that name. The Bean is among the most nutritive of vegetable productions grown, and this variety, we think, stands first, in that relation, among the whole family of beans.

Orchards.—If you have not treated your trees as we directed last month, do so this.

Out-houses.—If these have not been thoroughly cleansed and white washed, they should be early this. When using your white-wash brush, don't forget that your garden and lane fences are entitled to a coat.

Draining.—All wet grounds should be drained.

Implements and tools of husbandry.—These should always be kept in good repair, ready for use whenever needed. When not in use, they should be kept under cover—thus kept, they will last twice as long as when exposed to the weather.

Materials for making Manure.—We pointed out to you last month the sources whence to derive these. So let us now conjure you, to commence their collection without delay—when collected, form them into properly made heaps, in the way we have so often advised, apply them judiciously to your crops, and your land will continue to improve from year to year, until it shall have gained the maximum of fertility. Without manure, no farmer can farm to advantage—with manure, his lands will yield fruitfully, and improve in quality, and he grow rich. Now, what is the use of expending your horses' and hands' time, in trying to grow corn on land that on-

ly yields 2 and 3 barrels to the acre? There is no use in it,—you wear out your ploughs and other implements, exhaust the powers of your team and ploughmen, and, *make no money*. Whereas, had you taken a couple of good hands, and a team or two, you might have collected manure enough to fertilize that very land, so as to grow 8 or 10 barrels to the acre; we have, in an experiment, grown more than twice the largest quantity, and so can you, if you try. The fact is, that land, by being fed, and properly cultivated, can be made to produce a hundred bushels to the acre—and no man should rest contented until his whole crop averages 12 barrels to the acre.

Beasts of labor.—Feed and care for these, in order that they may reflect credit on you as their master, and go through their onerous toils with comfort to themselves, and profit to you. Make it a point of duty, to have them cleaned regularly twice a day—never permit your hands to beat and abuse your working animals.

Milch cows and other cattle.—Treat all with kindness, and be sure to have something extra good for the dairy cows.

Broadcast corn.—Manure an acre or two, and sow it in broadcast corn, to soil your stock on when the pastures give out. If fed to your cattle in the cow yard, and that well bedded with coarse materials, as it ought to be, they will make it all into good manure. Sow 3 or 4 bushels to the acre.

Sweet Potatoes.—Plant these without delay.

Tobacco crop.—See that this does not suffer—last year's crop was a short one, and the present must command a good price.

Jerusalem Artichokes may still be planted up to the middle of this month, with the prospect of a tolerable crop.

Salting of Stock.—Give twice or thrice a week, about 1 or 2 oz. of a mixture comprised of equal parts of ashes, salt and lime, to each of your stock.

Lime—Marl.—If your arable land has never been limed, or marled—or if from 12 to 15 years have intervened since it was, you may very properly conclude that it needs one or the other.

The best way to apply lime to *thin, sandy land*, would be, to make a compost, in the proportion of 25 bushels of lime, or 50 bushels of marl, and 20 double-horse-cart-loads of clay and marsh mud, 10 loads of each, to the acre; make it up into a heap, to let it lay for a few weeks, work it over, taking care to mix the matters well, and mix in with the mass, 1 bushel of plaster, repeat this twice, plough the ground you intend to apply it to this fall: in the fall, early, spread the compost evenly over the surface, harrow it in, and permit it to lie until next spring, when it should receive two ploughings, and as many harrowings, then roll, and it will be fit to receive manure and a crop.

To stiff clays not in very good heart, you may give fifty bushels of lime, or 100 bushels of marl.

To good stiff lands, abounding in vegetable matter, you may apply 100 bushels of lime, or 200 bushels of marl.

All limed, or marled lands, should be set in clover as speedily after the application, as is admissible by the nature of your rotation, it being desirable to have in the soil, a good body of mould for the calcareous matter to operate upon.

Mould.—Bear in mind, that *mould* is the life-blood of soil, and that no land can be very productive, unless it, or some other substance, identical in its nature, be present.

Clover.—Clover should be cut as soon as it comes into bloom, permitted to remain in the swarth 4 or 5 hours, then cured in cocks.

WORK IN THE GARDEN.

Time is always precious to the neat gardener, for there is hardly a day that there is not something of pressing necessity to be done. Each day, each week, each month, have labors peculiar to it, but there is no month that claims more than this,—so let us examine at once what ought to be done, in order that nothing be neglected, and no time be lost.

Planting Cabbage.—Manure, and dig up a good clay mould bed, rake it with care, and plant out plants; they must be set in rows 3 feet apart, the plants 2½ feet asunder in the rows. Seize the first season to do this, in order that your family may have early collards and headed cabbages upon the dinner table. In drawing the plants from the plant bed, be careful; have a mixture of 2 parts mould, 1 part soot, and 1 part flour of sulphur, reduced to the consistence of cream by water; as the plants are withdrawn from the bed; dip their roots and stems in up to the first series of leaves—by this care the plants will go onward, take root sooner, grow more vigorously, while the bitter and sulphurous compound will keep off the grub and cut-worms.

Now if you have no plants, buy a few hundred, in order that your family may not be denied so great a delicacy as is an Early York.

Canteleupes.—Prepare a deep loamy bed, by manuring it with a good dressing of stable manure, dig the manure in spade deep; rake the ground: then form hills, thus,—have a compost formed of 7 parts well rotted dung and 1 part ashes, thoroughly mixed together, lay off your bed into 6 feet squares, at each intersecting square dig a hole 12 inches wide, 6 inches deep, into that hole put a spade-ful of the compost, mix the earth dug out with another spade-ful of the manure, raise a hill upon the side of the hole, 4 or 6 inches high, 18 inches wide, draw a circle with a piece of stick, or the point of your finger, ½ an inch deep, in this drop 8 or 10 seeds, at regular distances apart, so as to allow for imperfect seeds and the depredations of insects, cover the seed over, then sprinkle about a quarter of an inch of the compost over the hill, and pat it gently down with the back of your spade. When the plants come up, dust them over for several successive mornings, early, when the dew is on them, with a mixture made of equal parts of ashes and plaster, or with soot and plaster. When the plants have made 2 rough leaves, thin out all but 4, leaving the strongest and most vigorous plants, having regard to position, so as to leave an equal distance between each plant. *Keep the plants, at all times until in fruit, clean by the hoe and hand.* If infected with insects, dust them occasionally with soot, or give them a watering with horse-dung tea, made as follows: put a half bushel of horse-dung, a quart of soot, and 2 oz. of flour of sulphur, into a bag, put the bag into a barrel, fill it up with water, let it stand a day, and it will be fit for use. When the vines begin to run, pinch off the upper joint.

Kinds to Plant.—Select either of the following kinds—Persian 'Green fleshed, Green Citron, Pine Apple, or Nutmeg; but do not plant two kinds, as they will mix if you do. The Canteleupe should not be planted near water melons, squashes, cymblins, or cucumbers.

Cymblins.—Plant some hills of cymblins, the same way as recommended for canteleupes—plant them as far off from the latter as the extent of your garden will allow, for the reason given above. Their culture must be the same as that of the canteleupe, they must be kept clean, and have the earth drawn around the stem to the leaves.

Cucumbers.—Plant cucumbers in the same way as recommended for canteleupes, the hills 4 feet apart.

Roasting-ear Corn.—Plant some of the early varieties of corn for Roasting ears, as *Smith's Early, Early White Mandan*, and the *Early Sugar*. These varieties will secure a continuous supply of roasting years, of some weeks duration. By planting at the expiration of a fortnight from the first planting you can prolong your supply.

Cauliflowers—Broccoli.—If you have plants of either, or both of these, set them out in a well manured, dug and raked bed, 3 feet apart. If no plants, sow some seed.

Sowing Cabbage seed.—Sow some *early* and *late* varieties of cabbage seed, for fall and winter use: not omitting *Savoy*.

Brussels Sprouts and Jerusalem Kale.—Seeds of these should now be sown.

Peas.—Plant a few rows of peas to lengthen out the supply of early ones—sow a few more rows at the expiration of a fortnight.

Beans.—Plant Bunch and Running beans early this month—among the latter don't omit to plant 50 or 60 poles of that truly delicious bean, the *Lima*.

Lettuce.—Set out plants, and sow seed.

Small Sallading, of all kinds, should be sown early this month, and every ten days throughout the month.

Radishes.—Sow Radish seed every week throughout the month.

Parsnips, Carrots, Beets.—Drill in a few rows of each of these for winter use: don't omit to do so.

Spinach.—Prepare a bed and drill in seed a foot apart.

Celery.—Prepare a bed and sow seed for late crop. If you have plants set them out.

Asparagus Beds.—Keep these clean of weeds—if you do not, they will raise seed enough to stock your garden next year.

Onions.—Hoe, but do not hill the bulbs of these—cleanliness and an open soil is all that is needed.

Turnips.—If you did not do so last month, early this sow a small bed of Early Dutch turnips for family use. See our directions for last month.

Salsafy.—If not done last month, drill in a few rows of this vegetable as then directed—as also of skirret.

Red Peppers.—Sow the seeds of these, of sorts, for your main crop.

Tomatoes—For your late crop you may still sow seeds of these.

Egg Plants.—If you have not already sown seed for your crop of late Egg Plants, do so in the first week in this month.

Endives.—Sow some seeds the first week in the month for an early crop—towards the latter part of the month sow more, so as to prolong your supply.

Pot Herbs—Medicinal Herbs.—Sow seed and plant out the different kinds of pot and medicinal herbs. For a list of the *kinds* that should be in your garden we refer you to our last number.

Weeds.—Let none find rest within your garden enclosure.

Take care to have a fine *display* of FRUITS, VEGETABLES and FLOWERS, at the *Maryland State Agricultural Society's next Show.*

CULTIVATION OF THE DAHLIA.—As we have been a successful cultivator of this splendid flower, and the time has now arrived for setting out the roots, we will state how we succeeded in obtaining good blooms. We selected a good loamy soil with an open exposure, the which we manured with a compost formed of 4 parts well rotted dung, 3 parts woods-mould, or marsh mud, 1 part ashes, dug this in spade deep. In preparing the holes for the tubers, we mixed the excavated earth with an equal quantity of the compost. After inserting the tubers, so as that their tops would be two inches lower than the surface, we filled in the compost. If the weather was dry, we watered them freely at the time of planting; and took pains that they did not suffer, in times of drought, throughout the entire season; giving them, upon such occasions, full waterings; and, at least once a week, or once a fortnight, treating them to a dose of soap-suds, or of soot tea. 6 or 8 quarts of soot will make a hogshead of tea of sufficient strength for the purpose.

Ten pounds of guano and a hogshead of water, well stirred, would form an excellent liquid for manuring the Dahlia with, twice in the course of the season.

When the Dahlia was first introduced into our country, it came accompanied by the sage advice of British florists, to grow them in poor sandy soils without manure, or, if any were used, that it should be very, very mild, and doled out in infinitisimal quantities. Having bought roots to an amount, which, to us, formed a heavy outlay, and being determined that our floral taste should have its full measure of gratification, we examined the bulbs, read the descriptions of their foliage, and at once concluded, that the directions which enjoined poor soil, no diet, or a meagre one, was the opposite of what it ought to be. We selected a fertile soil, manured, as we now recommend, with a free hand, and were rewarded with as rich, as brilliant, a bloom as the eyes of the lover of flowers ever rested on. Having marked out our course, despite the grahamite prescriptions which came to our shores with the matchless Mexican, we followed it out to the end of the chapter, and never were disappointed. We have no faith in starvation, whether the subject be a man, a beast, or a plant—our doctrine is—give to each something to eat, digest, and grow strong and fat upon.

☞EARLY CUTTING OF GRAIN.—In advance of the time of harvesting the *wheat* crop, we desire to impress these truths upon all wheat-growers. By cutting your wheat from 7 to 10 days *before it is ripe*, the following beneficial results will flow: your straw will be heavier, brighter, more nutritive, and make better food for your stock; while, to a certainty, your crop will escape injury from that fatal disease—the *Rust*.

We take time by the forelock to give this short notice; but shall, in our next month's conversation, treat the subject more at large.

Wheat intended for seed, should, we think, not be cut before it may have ripened. This, however, is an unsettled point.

Had our advice been followed last year we are confident that wheat-growers would have been spared the loss of thousands of bushels of wheat, which they sustained through the rust, owing to their delaying cutting until the grain was ripe.

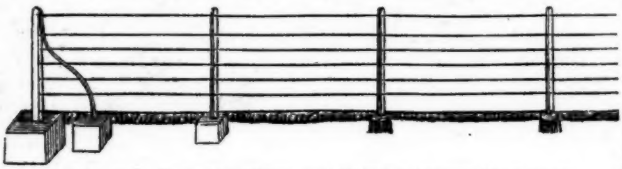
We will here add, that it would be consistent with enlightened economy, to harvest all descriptions of small grain, before they are fully ripe.

WIRE FENCES.

Messrs. Stickney & Beatty, Exchange Place, Baltimore, Agents for the Manufacturers, have favored us with a copy of the following circular, and as it is our wish to give all the information in our power upon the subject, having repeated enquiries in regard to it, we have concluded to publish it in the American Farmer. It appears to give more minute and satisfactory directions than any other description of this fence which we have seen. We have ordered a sufficient quantity for fencing a lawn, to be sent to Alex. Rives, Esq., of Charlottesville, Va., who will no doubt soon have it up.

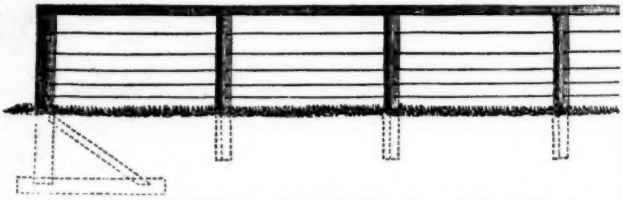
Iron and Wire Warehouse, No. 17 Burling Slip, New York, 1st April, 1851.

No. 1.—Iron Straining Pillar, and Iron Intermediate Posts.

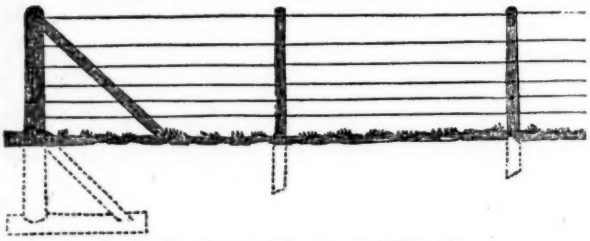


No. 2.—Iron Straining Pillar, and Wooden intermediate Posts.

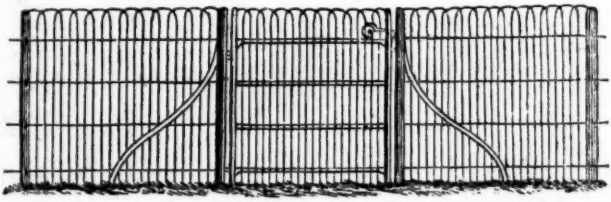
No. 3.—Wooden Straining Pillar, intermediates and top rail.



No. 4.—Straining Pillar, and intermediate Posts both of Wood.



No. 5.—Specimen of Ornamental Wire Fence.



The constant inquiries addressed to us in relation to the best mode and the expense of erecting Wire Fences, indicate that the subject is attracting very general attention. In this country, wire fences have been thus far an experiment, and as a matter of course, from improper construction, have occasionally disappointed the expectations formed of them. The first attempts in England resulted in the same way. There, however, an experience of fifteen or twenty years has served to correct all the original defects, and to make it the most popular, and at the same time, the cheapest fence in use. One firm alone up to the year 1849, had fenced in more than eleven hundred estates, and twenty lines of railway; and now have three rolling and wire mills, constantly employed in preparing the materials for their business.—Their experience has demonstrated conclusively:

1st. That only the best quality of Wire should be employed; made in long lengths, and equal in all respects to that used for telegraph lines.

2d. That annealed wire will not answer the purpose, because it has scarcely half the tenacity of bright wire, and rusts very rapidly.

3d. That the fence will be an utter failure unless substantial straining pillars are placed not farther than 100 yards apart, and at every corner; so braced as to resist a very considerable tensile force. The wire must be attached to these and strained perfectly tight, and afterwards fastened to the intermediate posts, which ought not to be placed more than ten feet apart.

4th. The fence should be painted with a good metallic paint.

To make a good fence, the above conditions must all be complied with. There is however, a choice in the selection of materials for posts.

The straining pillars may be either of wood or iron. If made of wood, the pillar should not be less than five inches in diameter, and set at least three feet in the ground. At the lower extremity it should

be framed into one end of joist or piece of plank, not less than five feet long; and a brace should extend from the other end to the pillar, about half way to the top. Or the straining pillar may be made of cast iron, of ornamental patterns, at a cost of from $1.50 to $2. As only one of these is used to every 100 yards, the expense distributed over this distance is almost nominal. The cast pillars should be bolted into stone blocks, having a face of about 14 inches square, sufficiently smooth to receive the base of the pillar, and deep enough to resist the frost. A brace must likewise be attached to these, and fastened also to a stone or wooden block, distant about three feet six inches apart.

The intermediate posts, placed as before mentioned, about 10 feet apart, may also be either of wood or wrought iron. If made of wood, they need simply be set in the ground as any common fence post. If of iron, they should be driven into a rough block of wood or stone, set below the frost. We make them of rolled iron and ornamental pattern, for twenty-five cents a piece, ready punched to receive the wires, which must be passed through the iron posts, but may be, if desired, attached to the wooden ones by staples. The wire used may be of various sizes, but certainly not smaller than No. 9. A larger size is recommended.

The following table will show the size and weight of the various numbers, and the price per strand, for a rod 16½ feet in length, at the current rates of best wire:

Nos.	Diameter in 1-100 of an inch.	Weight per Lineal Rod.	One Strand 16½ feet long costs
1	0.32	4 pounds 2 oz.	¼ inch wire, 9 cts.
2	0.30	3 " 10 "	No. 7 " 8 "
3	0.27	2 " 15 "	8 " 6¼ "
4	0.25	2 " 8 "	9 " 5 "
5	0.24	2 " 5 "	
6	0.22	1 " 15 "	
7	0.20	1 " 9 "	
8	0.18	1 " 04 "	
9	0.16	1 " 00 "	

Common wire would cost about one-fifth less, but its use will be fatal to the durability of the fence, and although we have it on hand at all times, we are compelled to condemn its use in any case, except for temporary purposes.

The cheapest wire, when the weight of materials and strength of fence is taken into account, is ¼ inch in diameter. This is rolled, and costs 3½ cents per lb. We recommend the use of the ¼ inch rods especially, as we can generally furnish nail rods, equally good for fence, at 3 cents per lb. which makes a strand 16½ feet long, cost only 7½ cents. Using this sized wire with iron straining pillars and intermediates, a substantial fence can be erected in almost any locality, from one dollar and a half to two dollars per rod; while, if wood be employed, or smaller wire, the cost will be proportionably less.

In putting up the fence, the great feature is, to strain it tight. This can be conveniently done by means of a lever devised for the purpose, working like a windlass, samples of which may be seen at our warehouse. Or, a man of ordinary intelligence will have no difficulty in making a rude windlass for the purpose; but if the straining be neglected, the fence will soon lose its adjustment, and become an unsightly object. By using wire in long lengths, a good article is ensured, and much trouble saved in making joints. These can be made by twisting the ends of the wire together, or by passing it through a spiral spring, in opposite directions, and bending down the ends of the wire. This spring affords a convenient means of adjusting the fences to meet the expansion and contraction of the wire, caused by changes in the temperature.

The diagrams annexed will afford a general idea of the arrangement of the fences, but in all cases where the quantity required will warrant it, or where there is a probability of a large demand, a man will be sent to superintend the erection of the fence on payment simply of his travelling expenses.

Wire fences made of good material, and in accordance with the above directions, will be found not only graceful in appearance, but cheap in cost and of great durability.

For the purpose of meeting the constant demands of the public for wire fences, we beg leave to say that we have arranged with Mr. J. B. Raymond, to take charge of this branch of our business, and that he will henceforth devote to it his entire attention. Very respectfully,

Your obedient servants,

COOPER & HEWITT.

The manufacturers write us that they have just been putting up a beautiful fence for Gouverneur Morris, of Morrisiana, and that they find the labor of putting up costs 20 cents per rod of fence, and that a first rate fence, all of iron, with ¼ inch wire, for strands, can certainly be made for $1.50 per rod.—Messrs. Stickney & Beatty will be supplied with the fence materials.—*Ed. Amer. Far.*

AGRICULTURAL LIBRARIES AND READING CLUBS.

To the Editor of the American Farmer—

Permit me to suggest to you the desirableness of the formation of District Agricultural Libraries and Reading Clubs, either or both of which, would in my humble opinion prove very beneficial to those who might choose to become members. To purchase the many valuable works published on the various topics connected with agriculture, would prove a severe tax on the pocket of an individual farmer; but the combined efforts of a club would easily effect this. If one hundred individual farmers in a district would pay the sum of one dollar entrance fee, and fifty cents per annum subscription, the sum of one hundred and fifty dollars would be at once provided for the purchase of a good Agricultural Library, to which in all probability, not a few presents of agricultural works, both native and foreign, would be made by the members and others—the property being vested in trustees, and each member being allowed the privilege of taking one volume at a time from the Library, a reasonable time being allowed for its perusal. If a Reading Club be combined with the Library, the various agricultural periodicals might be taken, and laid on the table of the reading room, and at the expiration of the current year of publication, be bound and added to the Library; and it is my impression, that but few farmers in a county or district could not spare time once a month or so, to visit the reading room, (which should be located as centrally as possible,) to peruse all the leading agricultural periodicals of the time, besides possessing the privilege of using the Library and all for *fifty cents per annum.* T.

[This system is in successful operation by the Medley's District Club, Montgomery Co. Md.—*Ed.*]

AMERICAN FARMER.

BALTIMORE, MAY 1, 1851.

TERMS OF THE AMERICAN FARMER.

$1 per annum, in advance; 6 copies for $5; 12 copies for $10; 30 copies for $20.

ADVERTISEMENTS inserted at $1 per square of 12 lines, for each insertion. In case of the continuance of an advertisement for six months or longer, a liberal deduction will be made. Address, SAMUEL SANDS, Publisher,
At the *State Agricultural Society Rooms*, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

☞MD. STATE AGRICULTURAL SOCIETY.—The members of the Board of Managers will bear in mind that an important meeting takes place Wednesday, 7th May. A full attendance is very desirable.

THE NEXT VOLUME OF THE FARMER.—One number more, and the present volume of the "*Farmer*" will be completed, and we take this early opportunity to request our friends to exert themselves to forward with their own subscriptions the name and cash for one or more of their neighbors—there are few but can do this, with the asking—but whether or not, we particularly ask all well wishers to our journal, promptly to remit their dues for the coming volume. The very small charge for the paper, leaves no excuse for those who desire it, to delay its payment. We are conscientious in the belief, that we give more than the equivalent for the *dollar* demanded for it—and many of our readers, we know, would not dispense with the Farmer, for from five to twenty times the price of it; a number have already paid for the ensuing year, and others for several years ahead—yet there are a goodly number whose accounts have not been balanced on our books for several years—this is, of course, partly our own neglect, or fault, in permitting such a state of things, *and must be remedied*—AND WE GIVE THIS TIMELY WARNING, THAT THOSE WHO DO NOT, AT THE COMMENCEMENT OF THE NEW VOLUME, RECEIVE THEIR COPY AS USUAL, MAY KNOW THE CAUSE OF IT. If there shall have been paid monies on our account to agents, who may not yet have settled with us, any mistakes will be promptly rectified.

TO CORRESPONDENTS.—*Guano with Plaster*—We have received from "T. S. P." a reply to our remarks in the last number of the "Farmer." Its length, and the necessity of accompanying its publication with such notice as its importance requires, renders it necessary to defer its publication until our next, when ample space will be allowed for the discussion. We have several communications upon the same subject, drawn forth by the agitation of the question in our last. We hope before the time for using Guano on the Wheat crop shall have arrived, that the investigation will be so full as to enable every one who reads it, to form a correct judgment in the premises.

We have also a reply from "*Patuxent Planter*" to the queries addressed to him by "T. S. P."—which will likewise appear in our next.

From Hon. D. W. Naill, a copy of his letter addressed to the French Consul, relative to the Potato crop of the U. S., elicited by the correspondence of the Consul with the late J. S. Skinner, Esq., upon the subject. Mr. Naill has furnished a copy of this letter at our request, with permission, if in our judgment, under the circumstances, there is no impropriety, for its publication. We can see none, and will give it in our next.

THE RUST IN WHEAT.—A correspondent, "Blue Ridge," has forwarded us an interesting paper on this subject, which we very much regret our inability to publish before our next number—He renews his suggestion, published in our February No., for the use of *lime*—"lime the seed when sown, (says he,) lime the wheat when harvest approaches, and rust is threatened by the peculiar condition of the atmosphere, and I expect good results from it."

Other communications, some of them heretofore noticed, will be published in due time.

"J. R. C." of Yorktown, will find an answer in part to his queries, about broom corn, on another page. We had none of the seed left for which he wrote. Our correspondent speaks in high terms of the "Shinney Pea;" he says that he has "never seen more luxuriant vines nor more peas made from the same quantity (though planted late) and so must conclude that it is among the best of the pea family," and concludes that they are "more valuable than the cow pea for improving *poor* land."—Mr. W. F. Chilton, of Caroline Co. Md. bears similar testimony to the value of the Shinney pea; he tried the Cow Pea, but too late in the season.

We thank our friend at the Naval Academy for his suggestions—we will endeavor to adopt them.

IMPORTATION OF FOWLS.—The newly aroused zeal for improvement in poultry is not exclusively confined to New England. It gives us pleasure to notice a recent importation of Dorking Fowls, in the Ship Robina, from England. It includes specimens, male and female, of the fine speckled variety, and also of the pure white, by many supposed to be the only true and pure breed. They may be supposed to be choice, since they come through her Majesty's Poulterer, and are from Dorking, Surrey. The importation is by William B. Dobbin, Esq. of Howard District, so conspicuous at our shows for his fine Jersey Blues. We understand these varieties of Dorkings are to be bred at separate places, and will be exhibited at the next Show, that amateurs may judge of them. We rejoice the more at this importation, since the same gentleman has made the experiment several times before, without being successful in getting them across the water.—These are in fine health.

Prince George Co. Va.—A subscriber in this county thus writes us:

"Although personally unacquainted, I tender you my hearty congratulation for the marked ability and zeal displayed in the conduct of your paper, believing that its general circulation among the farmers of this State, would conduce immeasurably to an elevated and improved system of agriculture. Wishing you such a circulation, for the two-fold reason of adding to your own coffers the "wherewithal" of life, and giving prosperity to the farming interests generally, I am, &c."

"THE SOIL OF THE SOUTH"—Bearing the above name, we have received the first number of an agricultural journal, published at *Columbus, Georgia*, by *Charles A. Peabody* and *James M. Chambers*, Esquires. It is issued under the auspices of the *Muscogee* and *Russell Agricultural Society*. As a southern man by birth, and in sympathy, we welcome our brethren of "*The Soil of the South*" into the editorial fraternity, with that *welcome* that comes from the heart. They have a glorious cause to support, and judging from the spirit of their editorials—from the taste and judgment displayed in their selections—and from the liberal sentiments they breathe towards their contemporaries—we doubt not that they will as gloriously sustain it; and, therefore, ardently hope they may be generously guerdoned.

Georgia has great agricultural, mineral, and other resources, which need only to be deveveloped to place her in an enviable position among the most powerful members of the confederacy; and we feel assured from the debut of "*The Soil of the South*," that its conductors have each the will and the ability to do a full yeoman's duty. May God speed their labors!

THE FARM JOURNAL.—The first number of a monthly agricultural journal has been received by us. It is published at *Lancaster*, Pa., and edited by *S. S. Haldeman*. It is gotten up in a remarkably neat style—its editorials, communications, and selections, are all characterized by talent, taste, and judgment. We sincerely wish that its spirited conductor may meet with brilliant success; and welcome him most cordially into the editorial brotherhood.

The Working Farmer.—This interesting agricultural periodical entered upon its third year the first of last month. It is published at New York, by Mr. A Longett, and edited, with industry and talent, by prof. Mapes of Newark, New Jersey.

The Farmer's Guide.—We have received the 15th number of this excellent standard agricultural work, now in the course of publication. It is edited by Henry Stephens, Esquire, F. R. S. England, assisted by our distinguished countryman, professor John P. Norton, of Yale College, New Haven. Like its predecessors, it is characterized by great practical knowledge and high scientific attainments. It can be had of Mr. *N. Hickman*, Baltimore street. The 16th No. is also received; among other excellent articles, it contains an interesting treatise on the management of the *dairy*, inluding the milking of the cows, the treatment of the cream, the manufacture of the butter, as well as of cheese. All the utensils used in these several branches of the dairy business, are not only named, but faithful representations of them are given, by wood and steel engravings. This number, as well as the preceding ones, are eminently practical as well as instructive, and cannot fail to be so esteemed by discriminating agriculturists.

How to procure new varieties of wheat.—Loudon says,—"the ordinary mode is to select from a field a spike or spikes from the same stalk, which has the qualities sought for, such as larger grains, thinner chaff, stiffer straw, a tendency to earliness or lateness, &c.; and picking out the best grains from such ear or ears, to sow them in suitable soil in an open airy part of a garden. When the produce is ripe, select the best ears, and from these the best grains, and sow these, and so on until a bushel or more is obtained, which may then be sown in a field apart from any other wheat. In this way many of the varieties of the common winter wheat have been obtained."

Marshall, of Yorkshire, mentions a case "in which a man of accurate observation, having in a piece of wheat perceived a plant of uncommon strength and luxuriance, diffusing its branches on every side, marked it, at harvest gathered it separately, and thus introduced a new and superior variety."

A letter from a gentleman in Petersburg, Va. in remitting the money for a subscription to the Farmer, adds:

"Feeling as I do the deepest interest in the largest possible increase of subscribers to the Farmer, I will lose no opportunity in adding to the list, those that I can persuade to read the work, believing that they can spend a dollar in no other way that will so amply repay them."

A subscriber in Powhatan, Va. in remitting for a new subscriber to the "*Farmer*" says:

"You will hear from me again before the close of the present volume.

"Your journal is fast gaining favor in this section, and is destined to work a wonderful revolution in the agricultural community. It is considered the best agricultural paper known to the people of Virginia, and when once a farmer commences reading it, he finds that he can't do without it—so it has been with me, and I would not dispense with it for many times its price."

A friend in Amherst, Va. in sending us the name of a new subscriber, writes us, that—"he is a young man, a young farmer, and has recently taken a young wife, and when he receives the "Farmer," he will have commenced life under the most auspicious circumstances. I am sure Mr. W. will be greatly benefitted by the precepts inculcated in your excellent agricultural journal, and will in a few years be one of the most thrifty farmers. The "Farmer" is destined to work wonders in this county, when more generally known. At present all those who subscribe, and *pay for it*, are the most thrifty farmers among us."

Another in Washington city in forwarding his own subscription, also sends for a new subscriber, and adds:—"I have had but about 2½ years experience thus far, and am still a "young Farmer," but in reference to your journal I may be permitted to state, that I have derived much valuable information; and further, that in all cases when I have had occasion to test the suggestions that I have observed in it from time to time, I have found them correct to the letter. Knowing then its value, I wish it entire success, and shall take great pleasure, as I have heretofore done, in recommending it to our agricultural friends everywhere."

A NEW FENCE.—Moore's Rural New Yorker, says, "Mr. John R. Remington, of Montgomery, Alabama, the inventor of the Remington Ærial Bridge, has patented a new and useful invention. It is a cement for making fences as durable as granite, and at a very reasonable cost of construction. The chief ingredient is sand, and it can easily be manufactured by plantation hands. The cement pannels are conveyed to the spot where the fence is to be located, and the two legs of each let into the ground like common posts. The cost to the planter is estimated at 10 cents per pannel of 10 feet by 5—four inches thick—far cheaper than the wire fence."

SOWING WHEAT IN JULY.

BURLEIGH, Sussex Co. Va., March 31, 1851.

To the Editor of the American Farmer—

In the May number of your journal, Vol. III., for 1848, page 344, there appeared an article on the "Utility of Sowing Wheat in July," being replies to inquiries addressed by "A Patuxent Farmer" to J. Jones, Esq. In the course of Mr. Jones' remarks, he uses the following language: "I have not sown any yet in standing corn, but I think I will put in, in that way, next July, and either cultivate or have a machine made," &c. It has been nearly three years since the publication of said article, and yet the farming community has never been relieved from the doubt left on the mind as to the "utility of sowing wheat in July." Numbers beside myself have looked anxiously, yet in vain, for practical information from that distinguished agriculturist, J. Jones, Esq. on this truly important subject. To elicit this information, is the object of this letter; and I offer no other apology to Mr. J. but the deep and abiding interest that I take in everything connected with agriculture.—Sincerely trusting that your next monthly issue may contain full information on the above subject, I remain,

Your ob't servant, T. E. BLOUNT.

P. S. Do you not possess some practical information on this subject? What think you of the practice of seeding in July in this part of the Old Dominion? Would not the Mediterranean be the best kind to seed in July, as it is nearly fly-proof?

Present my thanks to W. B. B. for his article on "Rye Straw," in answer to my inquiries, as I shall ever feel indebted to him for the full information he has so kindly given.

[On the reception of the above, we forwarded it to our friend *Jones*, with a request that he would answer it in time for our present number—which, (from his well known devotion to the cause of agriculture) we were well aware he would not fail promptly to respond to—and we annex his answer. Some of the best farmers in Kent Co. in this State, it is well known, favor this early seeding, and it is but a few weeks since the Hon. Mr. *Pearce*, of that county, reiterated to us his conviction of the advantages of it, if the hardy varieties of wheat were sown—and the *Mediterranean* would, we should suppose, be found most suitable for the purpose. Our friend, Major Jones, however, it will be seen by his remarks, though he was prevented from practising it himself, yet had ample opportunity to judge of its effects upon some of his neighbors, and is now adverse to its adoption, and our friend "P. P." to whom allusion is made, experienced pretty much of a failure, we learn, the same season. As far as our knowledge and information extends, this extremely early seeding of wheat does not find very general favor.]

WHEAT LAND, 12th April, 1851.

Dear Sir:—In answer to the inquiries of T. E. Blount, Esq., on the utility of sowing wheat in July, amongst the standing corn, I must beg leave to acknowledge that I have never carried out the experiment that was promised in 1848, of sowing wheat in July; although I had a field of 100 acres well prepared by a heavy, or *costly manuring with guano*, at the rate of 300 lbs. per acre, sown upon the sod with a machine, (a kind of lime spreader,) immediately before the plows, which turned the furrows about 6 inches deep. The corn was planted with Pennock's Drill, 4½ feet apart, it grew off well, and produced fully 50 bushels to the acre; but early in July of that year, a heavy storm of wind and rain blew the corn down so flat that it was impossible to get through it with cultivators, or other implements suitable for sowing wheat, consequently the experiment for that year was abandoned; and it was well for me it was so; for in consequence of the drought of the three following months, July sowing of wheat generally failed that year. My faith in July sowing has been shaken by the observation of the crops of that year, and I have not to this day tried the plan then proposed—and from the best information I can get, (and I have made inquiries of many of the best farmers in this section of Delaware,) I find that they have generally abandoned the plan of sowing in July; although some had succeeded very well previous to 1848, owing, perhaps, to the state of the seasons—for when the August and fall months have been wet, the early sowing succeeded very well—but dry seasons produce quite a contrary effect.

I am now preparing a field by sowing 300 lbs. of guano to the acre, as the one already referred to, with the view of sowing with wheat the coming fall, but not in July, or amongst the standing corn. I expect to cut up and carry off the crop as early as it will allow, and plow and seed in September if possible—if not then, as early in October as I can. By this manner of using the guano, I hope it may benefit the two crops, so as to justify the expenditure, which is certainly very great, when the cost exclusive of freight and charges is $48 per 2000 lbs.*

You ask, what is the prospect of the growing crop of Wheat? Do you mean of the price it will bring, or the quantity grown? If you mean the prospect of price, I must answer, that I think it is gloomy indeed; seeing that it is now so cheap, our home market having been broken up, and but little wanted for exportation, not enough to justify the use of much guano at anything like the price the British and Peruvian agents in this country hold it at, at present. If you mean the prospect as to quantity likely to be grown, I should think that it is *alarmingly good*. Much wheat in this section is down with the past rains, and several farmers talk of mowing it; whilst some are pasturing it. The prospect for the sale of Hussey's Reaper, perhaps was never better, as, from present prospects, no other implement now in use, from the *Sickle* up to the 4 *horse Reaper*, can save it, such is the growth of straw, and the probability of its falling.

Respectfully yours, J. JONES.

*N. B. Why do the merchants not say $24 per thousand pounds, instead of tons of 2000 lbs.? To say tons, and give lbs., looks deceptive, to say the least of it.

The reader is referred to the advertisement, offering a farm for sale, by Mr. Frederick Schetter. The gentleman of means and taste who may wish to possess himself of a country seat, would find this farm a most desirable one, as there are few so susceptible of tasteful embellishment, none offering greater advantages of locality. We understand that a *project* is on foot, to construct a *plank road* in the neighborhood, which will pass through it, thus offering the facilities of such an improvement to its owner, and giving him the option of three roads to our city. The dairy stock to be sold affords a rare chance to those wanting good cows.

FRUIT CULTURE.

To the Editor of the American Farmer.

DEAR SIR:—In a former communication, I promised to offer to the readers of the "Farmer" some remarks on the culture of fruit, which I had intended to have sent you last month, but being a believer in the truth of which you so frequently remind your readers, that, in all farming operations, it is essentially necessary to "take time by the forelock," and the past month being so favorable for ploughing, grubbing, &c., I have been endeavoring to push these labors ahead with all despatch, and on this account have been compelled to defer writing. But the recent snow having caused a suspension of out-door work, I will now endeavor to fulfil my promise. In this communication it is not my intention, or is it necessary, to speak of every operation in fruit culture, for there are many good works on fruit within reach of all. I merely wish to make some observations on the most important varieties grown in our State, and offer a few suggestions that may perhaps be of advantage to those who would wish to give their attention to their culture.

The first and most important step towards securing good fruit is, to get good, thrifty trees. The best season to purchase, as well as to plant out trees, is the fall, and if my advice were asked, I should say to all purchasers, go to the nearest nursery and select the trees yourselves, or send some one competent to choose for you. The digging commences as soon as the frost has caused the leaves to fall, and those who are first at the nursery are not only first served, but have an opportunity of selecting the best trees. Those who purchase at a distance from their residences, are not only liable to have their trees injured by long and careless transportation, but sometimes receive many indifferent ones, though this is not in all cases through want of faithfulness on the part of the nurseryman, but because, through press of business, the filling of some orders is left to the hands employed by him. Travelling nursery agents, or men professing to be such, are sometimes met with about the country, but farmers should be cautious how they purchase of them, for some have given very satisfactory evidence that they belonged to the "wooden nutmeg" fraternity. The squads of fellows who wander over the country every spring, grafting, are often "suckers" from the same "stock"—Any one who intends to plant an orchard, should be mindful of the fact, that 10 trees properly planted, and carefully tilled, will produce more fruit than 100 improperly set and not cultivated. I know this is a truth which many doubt, and they regard the accounts we sometimes see in agricultural journals of large crops of fruit, as the fictions of nurserymen, or other interested persons. It is not at all surprising, that a man who has become accustomed to consider 10 bushels of corn per acre a good crop, should doubt that 100 bushels could be produced from an acre. Yet it is nevertheless true, and it is equally true that a crop of fruit can, by judicious manuring and careful cultivation, be increased in the same ratio. I know of an orchard of five acres which, I am told, has sometimes yielded the owner $2.000 a season, from sales of apples, independent of the cider made from the imperfect fruit. Some, who know the orchard, do not believe this possible, but for myself, from the appearance of the fruit and trees along the road, (for I was never in the orchard,) I have not a doubt that it is true.

In selecting a site for an apple orchard, many choose a piece of rocky ground where the plough cannot operate, and some writers on fruit recommend such places as favorable for the growth of the trees, while they, at the same time, contend that a thorough cultivation with the plough of the ground occupied by the orchard is essential to its growth and thrift. This appears to be inconsistent. If it be not intended to cultivate the ground, no doubt rocky lands is better than a field without rocks; but that it is preferable to land that can be well ploughed, and when the roots can range in every direction without obstruction, it is hardly possible. The location usually preferred for an orchard, is a gentle slope, facing north, in order to retard blossoming in the spring, but many do not regard a northern exposure as necessary for the apple. A too steep declivity should be avoided, for if the orchard were cultivated as it should be, our dashing rains would sweep off the manure and mellow soil; the earth, too, would become banked up against the trees by constant ploughing in one direction, and the labor of digging around them be thereby increased. If the field intended for an orchard, be flat, and the soil a tenacious clay, it would be advisable to back-furrow the ground on which the rows of trees are to stand, and plough out the middles: this would draw off the water and prevent injury to the trees from excess of moisture. Some writers on fruit, when giving directions for planting out trees, say, "dig the holes two feet deep, put in a foot of compost or rich earth, and set the tree in it." I consider this a bad method. After repeated experiments, I would recommend the following mode. Dig the holes one foot deep, or less, if the soil be shallow, and 5 or 6 feet in diameter, put in 9 inches of mould or fine soil from the surface, set the tree on it, fill in with fine soil, working it in well with the hands among the roots, placing each one in the position in which it grew before the removal of the tree from the nursery. When the roots are entirely covered, tread the earth down over them, but do not trample the surface after the hole is filled up. A hole one foot deep will plant any nursery tree, for their tap-roots are shortened when they are set out in the rows, which causes the fibres to spread out horizontally; but if the soil is so shallow that the holes cannot be dug deep enough to bring the upper roots of the tree below the surface, without digging into the clay, then a mound of earth should be raised over them, with the upper surface slightly dished to hold the rain that falls on it. When trees are planted in this way, the earth about them can be spaded and kept mellow to the depth of the roots, and their growth will consequently be rapid and vigorous. But when a foot depth of compost or soil is placed beneath the tree, the weight of the earth above the roots causes them to settle until the lower ones are carried below the level of the subsoil; and when they have spread out as wide as the hole has been dug, their growth is arrested by the walls of clay with which they are surrounded. The quantity of mould beneath the roots also entices the small fibres to stretch downwards, where their range is limited to the hard bottom of the hole. A young orchard should be cultivated every year in some hoed crop. A good plan is to plant it every third year in potatoes; the intermediate years, it might be planted in beans, vines,

&c., and occasionally in corn. Lime and ashes should also be freely used, if procurable. The pruning of a young orchard should not be neglected; if properly performed and attended to when young, the trees will not require much pruning when they come into full bearing.

Another important operation which few think it necessary to perform, is washing the bark of the trees. I have seen unthrifty young trees start off and grow vigorously, after a good washing with ley and soap-suds. The eggs of the bark louse which are deposited on the young apple and pear trees, under a covering like a small whitish scale, retard the growth of the trees very much; they should be scrubbed off with a brush or cloth dipped in ley. The other insects that prey upon the apple tree are the caterpillar and the borer. The former are destroyed by wetting their nests with either of the abovementioned washes. They are always at home before sunrise, after sunset, and of a rainy day; their destruction at such times is easy and sure. The borer may usually be prevented from entering the trees by a few ashes heaped around the trunks early in the spring, but if any succeed in entering, they may be cut out, or some say destroyed, by plugging up their holes with soap. The canker-worm, so formidable an insect in some parts of our country, is unknown in the orchards in this neighborhood. Many modes of destroying them are given in fruit books. The elms of Baltimore are saved from their ravages by syringing their foliage with tobacco-water, but this would be too laborious for a large orchard. Writers on fruit tell us the insect remains through the summer and part of the fall in the ground beneath the tree. Repeated ploughing or spading of the ground during this time, I should think would exterminate them, provided a slight sprinkling of salt, potash, fresh ashes, and caustic lime should follow each stirring of the soil. The most minute portion of potash or salt is certain death to all grubs and worms that it touches, but the quantity applied must be small lest the trees be injured—In addition, the trunks, limbs, and crotches of the trees should receive a thorough washing with ley in March, to destroy any eggs that might be deposited on the bark.

I intended, when I begun, to have given a list of the most esteemed apples grown in this section of our state, and also to have spoken of other varieties of fruit; but that I may not weary your patience, Mr. Editor, nor that of your readers, I will bring this already too lengthy paper to a close. At a future time, if you can spare me a corner in the "Farmer," without crowding out more useful matter, I may say something on the cultivation of the peach, pear, apricot, &c. Yours truly,

March, 1851. A. W. S.

[Give us the "list" of "apples," and we promise to find room for your remarks on other fruits.—*Ed.*]

For the American Farmer.

Hints to Amateur Gardeners.

Cropping the Vegetable Garden.—As soon as the warm breezes of spring begin to refresh the earth, and incite in us anticipations of the coming seasons, every one who possesses a garden is of course desirous to stock it to the best advantage, in order to insure a constant supply of vegetables throughout the season. Before commencing active operations it may be well to spend a little time in considering to what purposes the ground can be most profitably employed. It is a common error, especially with those whose garden ground is limited, to grow the same kind of vegetables successively on the same piece of ground. This system may be followed, and good crops always realized, but at a greater expenditure of labor and manure than would otherwise be necessary; since the growth of one kind of plant frequently gives the soil a good preparation for a different sort. There has been some diversity of opinion respecting the rationale of the principles upon which the system of rotation of crops is founded—what may be termed the exhausting theory, is founded upon the principle, that, although the bulk of plants is made up of the same general primary elements, yet, different species require different proportions of these elements, so that each tribe of plants has a characteristic formation peculiar to itself. To secure a continued healthy existence therefore, the plant must be so conditioned as to assimilate both its general and distinguishing elements. Hence, to grow the same crop successfully on the same soil, for a number of years, it will be necessary to apply annually to the soil those elements carried off by the crops. This might be practicable, if we knew the exact amount of those substances, but this involves a question of rather difficult solution. Another theory which has been promulgated by some able phylologists, proceeds on the supposition that plants do not so much exhaust the soil, but that the roots perform a double office, acting as absorbents of nourishment, and serving as channels for throwing off hurtful excretions, and those excretions though unfavorable to the growth of the same tribe of plants, are, nevertheless favorable, and act as stimulants to plants of other species.

This theory, though supported by beautiful experiments, is not much insisted upon by vegetable physiologists of the present time, although they do not deny that roots have the property of ridding themselves of deleterious or superfluous matter. Moreover, these experiments were generally performed with plants placed in artificial conditions, therefore they can hardly be adduced as evidences of the wonderful changes constantly going on in the great laboratory of nature. It matters but little in a practical point of view which of the above reasonings are correct, as they both tend to show the advantages of following a good rotation of cropping.

It is not possible to lay down definite rules, that would apply with equal force to all cases, but a few general rules may be specified. Plants that are grown for their seeds, as peas and beans, should be followed by those that are grown for their leaves, as cabbages. Long rooted plants, as parsnips, carrots, &c. should be followed by those that root near the surface;—Early summer crops should be followed by those to be used in the fall. In reducing these into practice, two modes may be adopted; either by having only one crop on the ground at a time, and when that is cleared off, succeeded by another, or, have two or more crops on the same piece of ground, so arranged that one will be removed before it interferes with the other. To carry out the first mode, a piece of ground may be sown with peas, and when these are cleared off it may be sown with turnips, or beets; or, the ground under early potatoes will be cleared in time for planting winter cabbages. A more economical system is to grow several crops at the same time; for instance, the ground intended for musk melons

may be sown with peas, in rows six feet apart, which will leave enough space for making the melon hills, the young plants of which will start earlier and grow all the better for the protection afforded by the peas; or the first sowing of peas may be five feet apart, which will admit of a row of early potatoes between each. In due time, a row of purple brocoli may be planted on each side of the potatoes, which will be well advanced by the time the other crops are cleared away. Much can be done with a small piece of ground, when managed in this way, as it presents great advantages in sheltering young and tender crops, by those of a more robust or matured character; vegetables are also found to produce more abundantly when planted at a good distance apart. It would be useless to multiply examples; these will serve to illustrate the methods, and those who feel inclined, can easily modify them in various ways, as convenience may direct, or fancy suggest. It is well to bear in mind, however, that, although most plants are grateful for a little shade and shelter when they are young and tender, it is highly injurious to their healthy development when long continued. PRIAPUS.

March 16th, 1851.

CLEARING WOODLAND FOR CULTIVATION.

To the Editor of the American Farmer—

What is the most speedy and thorough, and least costly method of clearing woodland for cultivation?

What is the process for making potash, and what trees are the best for that purpose?

Having in vain sought full information on these subjects in those agricultural publications with which I am familiar, I am induced to make these queries, hoping that you (or some of your correspondents) will give me the benefit of your, or their experience, through the pages of the American Farmer. I am, Sir, your obt. servt. T.

ANSWER TO THE ABOVE.

We know of no speedier, more thorough, or less costly plan of clearing woodlands for cultivation, than the old one of felling the trees with an axe and grubbing up the roots. We have lately seen a cut and description of a Root Extractor, which with the force of two horses, and two or three men, is said to draw out the stumps and roots of 100 trees in a day.

Having no personal knowledge of the manufacture of *Potash*, we know not how we can better comply with our friend's inquiry upon that head, than by copying the following from "*The Dispensatory of the United States of America*"—a work of reliable authority:

"*Natural state and preparation.* Potash and Pearlash of commerce are procured from the ashes of wood, by lixiviation, and the subsequent evaporation of the solution obtained. The alkali exists in the wood, principally in the state of acetate; and being of a fixed and incombustible nature, is left behind after the incineration. The wood is burnt on the ground in a place sheltered from the wind. The ashes consist of a soluble and insoluble portion. The soluble part is made up of carbonate of potassa, together with the sulphate, phosphate and silicate of potassa, and the chlorides of potassium and sodium, and the insoluble portion of carbonate and subphosphate of lime, alumina, silica, oxidized iron, and manganese, and a little carbonaceous matter that had escaped combustion. The ashes are lixiviated in barrels with the addition of a portion of lime, and the soluble substances above mentioned are taken up. The lixivium is then evaporated in large iron kettles, which for several days are kept constantly full. The evaporation continues until the mass has become of a black color, and the consistence of brown sugar. It is now subjected to as powerful a heat as can be raised by the best wood fire for a number of hours, by which it is fused. During the process of the fusion, the combustible impurities are for the most part burnt out, and a gaseous matter is emitted, which agitates the more fluid part. When the fusion is complete, the liquid becomes quiescent and looks like melted iron. It is now transferred by means of large iron ladles, to iron pots, where it congeals in cakes. These are broken up and packed in tight barrels, and constitute the potash of commerce.

If it be intended to make *pearlash*, the process is varied. In this case the black matter, as above mentioned as of the consistence of brown sugar, called *black salts* by our manufacturers, instead of being fused, is transferred from the kettles to a large oven-shaped furnace, so constructed that the flame may be made to play over the alkaline mass, which in the mean time is stirred by means of an iron rod. The ignition is in this way continued until the combustible impurities are burnt out, and the mass, from being black, becomes of a dirty bluish-white color.

The ashes of plants amount generally to not more than a few parts of a hundred; and of these a portion only consists of potassa. The different parts of the same vegetable, and, for a stronger reason, different plants furnish variable quantities of ashes. Ligneous plants furnish less than herbaceous, the trunk less than the branches, and the branches less than the leaves. The bark yields more ashes than the wood; and the leaves of trees which drop their foliage in winter, more than the leaves of evergreens.

The following table gives the quantity of *potassa* contained in one thousand parts of different plants:

Pine	0.45	Barley straw	5.8
Poplar	0.75	Beach bark	6.0
Birch	1.29	Fern	6.2
Beech	1.45	Stalks of Indian corn	17.5
Oak	2.03	Sunflower stalks	19.4
Oak bark	2.08	Dry oak leaves	24.0
Box	2.26	Common nettle	25.0
Willow	2.85	Black elder	25.5
Linden	3.27	Vetch	27.5
Elm	3.9	Poke	45.6
Maple	3.9	Wheat stalks, young	47.0
Wheat straw	4.18	Dried stems potatoes	55.0
Flax	5.0	Wormwood	73.0
Common thistle	6.37	Fumitory	79.0
Rush	5.08	Angelica	96.2
Vine branches	5.5		

We think it would be best for our correspondent before entering upon the manufacture of potash, to visit some of the establishments in Western New York and Canada.

Plastering Wheat.—Our advice to our friend at Hay Market, is, not to *plaster* his wheat thus late; though we have no apprehensions that it can in any way injure the wheat plant.

SAVING OF MATERIALS FOR MANURE.—We commend the following, from that eminent agriculturist of Dorset, Dr. Muse, for the imitation of all our readers. We would here add, that the accounts from all quarters, as to the present appearance of the Wheat crop, are similar to that given by Dr. M. and Maj. Jones, but the crop has to go through severe ordeals yet, before the time of harvest.

"My wheat crop is luxuriant and rich in prospect, and no Guano ever fell upon it, nor ever will, at present prices. By means of corn-stalks, cut early and fed to the cattle in the common feeding pen, and the refuse woody litter rejected by them, assisted by swamp earth, stable manure, ditch banks, and other materials, organic and inorganic, I cover nearly a field, every year, with manure; though not so concentrated, yet as valuable, in larger bulk, as Guano, and annually repeat this practice, at but little cost. I consider, too, that corn-stalks are nearly equal to clover hay as *food* for cattle; and yet, they are here, and I believe, generally elsewhere, thrown away as useless. Corn stalks contain, by infallible analysis, 50 per cent. of starch, gum and sugar, with about 3 per cent. of gluten, besides the silicate of potash, of their external covering; they are good food for cattle until, in the advance of the season, they become too dry and hard for this purpose, but then contribute to the bulk and value of the manure compost. Did farmers but believe this character of corn-stalks, they certainly would not waste them, as they nearly all do. Excuse this unintended digression.

I must add, that I am busily employed in making *sub-drains*, according to the method indicated recently by Ruffin, with green pine saplins, covered with green pine boards, which he says will last half a century and more. I made 10 years ago an immense length of these drains, with the more costly material of seasoned oak, and they have long since rotted and filled up, as he states his old attempts have done, before his present discovery. My lands will not admit of more than 30 inches depth, which I hope will accomplish my purpose."

EFFECTS OF VARIOUS MANURES IN GROWING POTATOES.

The celebrated *Arthur Young*, made the following *experiments*, to test the relative value of the several kinds of manure named; the results of which will be seen in the following tabular statements.

In the last of March, 1787, he says:—"the White Champion potato was planted in beds, each containing a square perch of a good sandy loam, on a wet clay marl bottom, the sets being planted one foot apart." The results were:—

	Quantity per acre of manure.	Produce in bush. per acre.
Soil simple,		180
Farm yard dung,	16 cubic yards	240
" "	21 "	200
" "	32 "	280
" "	32 "	400
" "	42 "	360
" "	53 "	400
Soot,	160 bushels	360
Wood ashes,	160 "	240

"At the same time, and on the same ground, 12 square perches were planted with the same potatoes, and manured as described in the following table, which also gives their respective products:

	Quantity per acre of manure.	Produce in bush. per acre.
Soil simple,		280
Dung,	32 cubic yards	400
Wood ashes,	40 bushels	400
Slaked lime,	160 "	380
Rotten straw with some little animal manure,	32 cubic yards	400
Urine and soap water in equal moieties,	1440 gallons	240*
Barley straw,	1½ tons	300
Potash,	340 lbs.	380
Dung, Salt,	32 cubic yards 160 lbs.	400
Dung, Lime,	32 cubic yards 160 bushels	480
Dung, Urine,	32 cubic yards 480 gallons	520

"The great product," adds Young, "which attends the addition of *Urine* to dung, affords a very important lesson; which is, *to manage dung hills in such a manner as to save, if possible, every drop:* this is a point too much neglected; and, indeed, by most common farmers very little attended to.—*Annals of Agr.*

*The falling off here, evidently arose from the fact that there were no mould or other vegetable and animal matters mixed with the liquid manures applied, to husband and utilize the ammonia as generated or formed, by the decomposition of the urine. The truth of this proposition is clearly demonstrated by the result of the last experiment.

Urine, diluted with twice its volume of water, may, very safely, be used upon a freshly mowed surface, where the soil is well filled with decomposable matters; but we think the most economic application of it, is that in which it is composted with mould, or putrescent manure; in either of these cases, its beneficial action would be greatly promoted and prolonged, by combining with it a fixing agent, as plaster, or pulverized charcoal. Had a large body of *charred* peat been saturated with the quantity of urine and soap suds named, the result would have been very different; there would, then, have been something for the salts of ammonia and potash, in the urine and soap-suds, to act on, something for them to convert into food for the potatoes —something substantial for the potatoes to build up their structures with.

Urine, when combined with dung, or kindred substances, is, beyond all comparison, among the most powerful of all concentrated animal manures: when thus combined, it is most effective and fertilizing in its results.—*Editor of the American Farmer.*

SCHENCK'S GARDENER'S TEXT BOOK.—We are indebted to Messrs. *Cushing & Bailey* for a copy of a neat duodecimo volume, bearing the above title. It contains "practical directions upon the formation and management of the kitchen garden; and for the culture and domestic use of vegetables, fruits and medicinal herbs." The author is Peter Adam Schenck, formerly gardener to Edward C. Williams, Esq., of Boston."

We have examined its pages, find much to approve of, and believe that any one, by following its directions, without previous knowledge of the art, might become a very respectable gardener. Its instructions are plain, and can be followed with advantage, by any one who is not too *wise* to profit by book-gardening.

THE SHINNEY PEA.

To the Editor of the American Farmer—

The March No. of the American Farmer has just come to hand, and I have read the reports upon the Peas of Edmund Ruffin, Esq., and Mr. Blount. If "he who causes two blades of grass to grow where only one grew before," is a benefactor, how much more ought he to be esteemed who causes two peas to grow where only one grew before, especially in all our Planting States, where peas are valuable, and grass a plague. If the Shinney Pea prove as valuable, or nearly so, to others as it has to me, and every one around me except one person, and I can succeed in introducing them into general cultivation, I will feel the satisfaction of having rendered my brother Planters a service; and we stand in need of aid from each other, having been made hewers of wood and drawers of water for others, and for no sins of our own. It is very possible that Mr. Ruffin may have cultivated the "Shinney" before, though there are other varieties of early peas, that from recollection only, might be mistaken for them, though very unlike them when compared together. I can give no satisfactory history of them, further than I have been connected with them. It is very probable that Mr. Blount has given the true origin of them. I gathered by permission about one teaspoonful of them in the garden of a friend, who described them as a two-crop pea brought from Philadelphia. I sowed them the next spring in my garden, and the first crop was gathered and sown again in July, in a field along with the Cow-pea, procured from four different localities, some expressly for experiment, a red pea called the Chickasaw, and said to be very productive, and another variety of early pea, brought by my overseer, and which he seemed to think very highly of. Although none of the products were measured, yet the Shinney and Chickasaw were evidently so much more productive, that my overseer gave up his favorite pea as less productive though earlier than the Shinney, and they were all reserved for further trial, which resulted in the undoubted superiority of both over the Cow-pea. The summer before the last, some circumstances led me to have their relative products weighed when gathered, and the result was, ¼ acre of Chichasaw peas yielded 280 lbs. in the pod, 1 acre of Shinney, 1288 lbs. (or 322 lbs. per ¼ acre) and ¼ acre of Cow-peas, just alongside the Shinney, 82 lbs!

The land being rather better, might be the cause of the difference between the Chickasaw and the Shinney, but the Cow-peas grew immediately alongside the Shinney, and there was no difference in the land that I could perceive, and cultivation and every thing else was the same.

This trial was so conclusive that I have never sown a Cow-pea since. As I find it difficult to separate the different kinds of seed, and also because I prefer the Shinney, I have discarded the Chickasaw also. That the gradual and extended production is much greater, is precisely the greatest reason for my preference for the Shinney. They are also much easier to gather than any other pea that I have ever known. That they are hard to shell is also in my estimation, a great advantage, for two good reasons, first, because they waste less in gathering and handling, and cannot so easily, when fed to animals, have the grain stolen, and the haulms or husks only given to the animals, and secondly, because the peas are thus entirely protected from the mite and bugs, which render the Cow-pea so bitter and honey-combed as to be refused by all animals, however hungry. The Shinney is the most vigorous grower that I know of, therefore the best for plowing in green or curing for forage. It is also more easily cooked than the Cow-pea, therefore more safe for negroes, and it swells much more when cooked, and therefore goes further as food. The only objection that I have ever found in it is, that the pods soon rot when exposed after ripe to bad weather, but as a compensation for this, by gathering the pods as soon as they are ripe, the stalks bear more. After all, Mr. Editor, it may turn out that the Shinney may not be as well adapted to your soil and climate, or to your circumstances as to mine, and therefore prove less valuable than some other varieties, but it will be only by trying the different kinds, that each farmer and planter will be able to select for himself and his circumstances. I am, from circumstances, no planter of peas for sale, lands being quite too scarce and dear about me to render it a profitable crop, and my Cotton and Rice allow me but little breathing time, too little to attend to many small though important matters. All I aim at, is to bespeak a fair trial of the Shinney, believing that many will find it an acquisition.

I remain yours, very respectfully,

ROBERT CHISOLM.

SWEET POTATOES, &c.—A friend in Alabama has sent us some *sweet potatoes* of a most valuable variety, for poor sandy soil, to be cultivated in ridges—also some seed of the variety of red, so astonishingly productive, and so excellent for hogs—for stock they surpass every root grown, he informs us, and grow to a singular size—they are said to be invaluable for making pork—by turning the hogs into the field, with some of the black Tory pea in the same field, the pork produced is unequalled—they mature with him, by 15th July. Our friend has also sent some *Peas*, for winter use, and for fertilizing soil, which he says are preferred to the cow-pea; and are very valuable for the use of the laboring classes, they preferring them, made into soup, with carrots, cabbages, and other garden vegetables put into it, and boiled with pork or bacon, before any other diet—they resemble in taste the white homminy bean, are very nutritious and substantial, and not flatulent—He has sent us likewise, some of the genuine *Upland Rice*, raised on the top of the pine ridge, where corn would not have made a stalk—he plants rows 18 inches apart, thick in the drill, tends with a scooter, stirring in between the rows with a little mule, finising off with the hoe—any kind of land will do for it, but on manured land, the crop is said to be prodigious; the ladies prefer it to any other kind for culinary purposes—break up the land deep and well before planting, and nothing pays better for a first crop on new land, or puts land in a better state for another crop—the straw is most valuable ruffage for cows, mules and horses, and they are fond of it—planted in Alabama before 15th Feb. and by cutting just before ripe, the rice bird is anticipated about 20 days—it will produce with artificial manure, 100 pounds shelled rice per acre—Rice in the hull boiled and mashed up with sweet potatoes, is said to be the most economical and best food for poultry and pigs known, and produces the most excellent flesh, and delicate beyond all other. We will distribute

these seeds among those of our friends who are disposed to give them a trial.—Our friend remarks:

"I have grafted this year on *scions* from the root of the Vermont greening, which apple, after 20 years also regrafting, I have perfectly acclimated,—now superior to the Vermont apple in size and flavor, juice, flesh, &c. It is a singular fact, that all fine northern apples become more highly *flavored*, and of *finer juices* by continued cultivation in this climate.

"Guano works *miracles* here—brings corn to maturity 25 days sooner—*I cut down corn* planted on the *full moon in March*, in time to plant the ground in *sweet* potatoe vines, and have *a first* crop—I cure corn always in this way, giving the *pea* crop a *full chance*—put the guano in the *hill*—sandy land."

A NOBLE EXAMPLE OF FARM ECONOMY.

We have repeatedly directed the attention of the agricultural community, to the great value of *hen-dung* as a manure, and urged upon them the propriety of saving it as a means of enriching their lands. It was, therefore, with feelings of sincere pleasure that we read the followinging in a communication from the pen of *A. G. Sumner*, Esquire, of Ravenscroft, South Carolina, which appeared in the February number of the Pendleton *Farmer and Planter*.

It will be seen that Mr. Sumner, from September of last year, to February, of this—a period of only 5 months—saved 20 barrels of hen-dung, the richest of all farm manures. Such is the high appreciation in which we hold its fertilizing qualities, that we feel assured we hazard nothing in asserting, that the quantity saved by Mr. S., is sufficient, if composted with 100 bushels of *ashes*, and 20 bushels of *plaster*, to grow 400 bushels of merchantable wheat—that each barrel, if thus treated, will be ample not only to manure an acre of land that will yield 20 bushels of wheat, but if such compost should be ploughed in, as all such manure should be, will be found competent to carry the land through a rotation of four or five years duration, and leave it in an improved condition; provided clover, or grass should, in the meantime, have been sown upon the wheat.

Estimating the hen-dung saved by Mr. Sumner, at its intrinsic value, in dollars and cents, we would say it was worth $100; for we consider it, when properly preserved and treated, very nearly, if not quite as good as the best guano; better than much of it.

We commend the following extract from Mr. S.'s communication to the attention of our readers:

"I find them [chickens] a valuable auxiliary in manuring, as I consider domestic *hen-guano* properly tempered down, a good manure for trees the second year of their growth in the orchard.* I have now *twenty barrels*, gathered from about one hundred and fifty fowls† since September last. My mode is to have the hen-house carefully scraped up once a week, and packed with the underlying earth in old lime barrels covered with a top-layer of *gypsum*. It is practicable to save this powerful manure in the winter, but as I make my fowls resort to nature's hen-houses—the trees—in summer, the greatest portion is wasted or washed away by the rains."

This *example* of Mr. Sumner, is worthy of all praise; and we sincerely hope it may prove contagious among his brethren every where. Let the principle of enlightened economy in the *saving of manure*, once seize upon the agricultural mind—let it once be engrafted upon the planter and farmer's code—let attention to small matters become, as it ought, a passion—let it be confirmed by fashion,—and a very different aspect will soon be put upon the prospects of husbandmen—Old fields, which have been reproaches, heretofore, to many a homestead—to many a hospitable homestead—will ere long exchange their sedge and poverty-grasses, for those of the cultivated varieties, and be covered with the richest verdure,—generously contributing, by their products, to the sustenance of their owners and all who derive their support from them.

*It is good for every plant, grain, and fruit, that grows, and when treated as we have suggested, will prove a prompt and efficient fertilizer of the soil.

†Mr. Summer keeps the large number of fowls named by him for their services in the orchard, in the destruction of the curculio; so that he makes them work for a living, and, through the preservation of his fruit, derives a benefit, more than equal to the food consumed by them, besides that arising from the large quantity of rich manure they make, to say nothing of their eggs, and increase in chickens.

REAPERS.

As we are confident that in a few years the Reaping Machine will be universally adopted, in consequence not only of its saving in the cost of harvesting, but also from the scarcity of labor, we wish to give all the information upon the subject, which comes under our notice—consequently we publish the following extract of a letter, from a gentleman of this state, with which we have been furnished:

WATERLOO, Nov. 12, 1850.

"My brother and I, having rather heavy harvests for our forces, determined to buy a Reaper in partnership. When he was about to start to Baltimore, to procure one, I cautioned him particularly "not to get McCormick's," having seen an article in the American Farmer (by Dr. M. of Eastern Shore of Maryland) in which Hussey's and McCormick's Reapers were compared, as I thought, much to the prejudice of McCormick's—But my brother, contrary to instructions, meeting with Mr. Whitman of Balt. was induced to purchase one of the forbidden McC. Reapers.

I commenced reaping in my own crop, in a lot of wheat, some of which was 6 ft. 4 inches high, and some not over 3 feet, and it would have done you good to see how she laid it down, with two poor nags, and a *green* raker and driver, and I cut my field of seventy acres, and my brother's of about sixty acres, and all without wasting the horses one pound in flesh to all appearances.

Mr. Plowden, who is a large wheat grower, has had one of Hussey's Reapers at work for three or four years, and one might suppose that the appearance of a Reaper would be nothing to attract his attention—but it was otherwise; my field was thronged with visitors all the time, and all pronounced its work admirable and perfect.—Even Mr. Plowden, who is wedded to Hussey's from services rendered, said it worked beautifully. So well pleased with it were those farmers who saw it work, that I think I could insure the sale of at least six in this immediate neighborhood at a small premium. One gentleman, who is a man of few words, after following the machine about an hun-

dred yards, and watching every rake and turn of the reel without a word, first made use of the language, "I'm done with Cradles;" another said "If I can raise forty dollars I'll have one." I only write these to show (they are a few of the many commendations) how the Reaper took in this neighborhood. Mr. Burroughs, (overseer for Mr. P.) said, after seeing the beauty, and the ease with which my team took it along, that he would persuade Mr. P. to have one of them made to cut a ten foot swath, for he knew that four of his mules could take it along with ease.

After the first day I drove, principally, myself, and could drive, (as any one can after a little experience,) so as to cut a lot of wheat of any shape, even if it had become a mere strip, I could turn the horses by retaining the wheat on the platform, till past the corner, without treading on a pile. She has been well tried I assu e you, for I cut across gulleys that were so deep that when the cog-wheel went down into them, the small wheel would be raised up off the ground, and yet she stood it without break or crack.

If I were asked, what I consider the advantage of having McCormick's Reaper, I should say candidly, that I think the Reaper worth at least $15 per day, besides the saving of enough wheat over and above what the best cradles save, to pay for herself, reaping a field of 50 acres of good wheat. In fine, sir, if there could be no more Reapers made, but the privilege of keeping this one up by repairs reserved, I would not take $1000 for it, and I've heard my brother say the same.

Respectfully, Z. Blackiston."

RYE AND CORN FOR PASTURE.

Leaonardtown. St. Mary's Co. Md. March 30, 1851.

To the Editor of the American Farmer—

Sir:—Enclosed you will find one dollar; you will oblige me by sending to my address the American Farmer for this year. You will also oblige me if you can give me any information with regard to *Rye*. I am often very scarce of pasture, *early* and *late*,—would not rye, sown among the corn in July, make a vigorous growth before the winter, and afford a good bite for stock, to be used as a pasture, and to be turned in the following autumn and wheat sown thereon? how much to be used per acre? would the rye come up among the wheat?—Your opinion as to the foregoing will be looked for with the greatest interest.

Yours, &c., L. S. Gilliams, M. D.

ANSWER TO THE ABOVE.

Rye, sown among *corn*, at the time of its last working, would form an admirable *fall pasture*, and especially would such be the case, if the corn had been well manured. It can be eaten off by stock as late as *October* and *November*, and still make a good crop of grain. It may be grazed by sheep in *early* spring, with decided advantage to the land, and no detriment to the crop of grain.

Whether the *Rye*, after being turned under, and the land seeded to wheat, "would come up among the wheat," would depend altogether upon the manner in which it may be ploughed under. If the corn-stalks were removed, before turning under the Rye, and the ploughing were executed with nicety and truthfulness, to the depth of six inches, and the furrows laid flat, we should not anticipate that the rye would come up again; but on the contrary, we should expect fermentation promptly to occur, decay take place, and that the manure, thus produced, to very materially aid in nourishing the wheat crop.

If, however, it be contemplated to plough in the Rye, while the corn-stalks are standing, we should fear, that there would be Rye plants enough survive, to seriously interfere with wheat, as the stalks would operate to prevent that accuracy of ploughing, which we deem essential to the *death* of the Rye plants.

For the purpose of grazing contemplated by our correspondent, at least 2 bushels of Rye should be sown; and even three bushels, per acre, would not be too much, as the object ought to be to give a dense stand of plants.

If 2 bushels of ashes, 1 bushel of plaster, and 1 bushel of salt, per acre, were sown and harrowed in with the Rye, the effect would tell effectively, not only on the Rye-pasture, but on the succeeding wheat crop.

Our friend "*The Dutchman*" is informed that plough No. 3, which took his fancy, is a good one, but too large and unwieldy for any thing but heavy ground, when it takes a plaguey strong team to make it "do its do,"—with plenty of motive power, it can, make the clods stand about, and go deep enough to delight the heart.

The *Livingston* plough is a capital one, bears a good name every where among *good* judges, as an "honest, faithful implement."

The *actual* depth of a furrow is rather *deceiving*, and not easily ascertained by one who may not be aware, that the plough-share has a way of puffing up the earth somewhat like the Lord Mayor's dinners do the stomachs of London Aldermen.

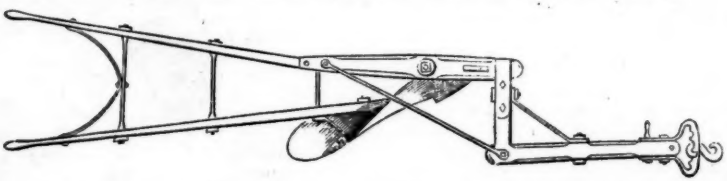
Now, as to that aforesaid Drilling Machine, of which we wrote in February, and upon which our friend "*The Dutchman*" has so refreshingly descanted, it gives us pleasure to state that after having made anxious inquiries in the premises, we have ascertained it to be a fixed fact, that Corn Planters or Drilling Machines, are made and sold in the city of Baltimore, by Messrs. *R. Sinclair, Jr. & Co.*, that can "drop corn regularly" at any desired distance, and "drop from 4 to 6 grains in a hill, that have been soaked and rolled in plaster and ashes," provided, after the soaking and rolling, the aforesaid corn be spread out upon the barn-floor, or any other equally notable place, and *dried*. It also does "cover at the requisite depth." To ensure these clever things being cleverly done, the drill will have to be bespoke, in order that it may be so adjusted as to fulfil its intended mission. It is withal, as strong as a Welsh bull, and is *not* "liable to get out of order," being simple, made for service, and not for show. It hath much of the Conestoga, but nothing of the *dandy* about it.

Such an "intelligent machine"—such a "good, honest, faithful and industrious drill"—"would," we admit with our friend, be worth its weight in—"corn"—and can be bought for $20. Where the distance of planting may be desired to be varied, it will be necessary to get an additional cylinder, or so, which can be procured of the above named manufacturers, at $1 each.

As there is no one, whose manner of saying and doing things, we more admire than those that are said and done by our good friend, "*The Dutchman*," we desire him to call his "sober second thought" to his aid, take courage, and give us his "experience of raising corn," as we are certain the public would be largely benefitted thereby.

For the American Farmer.

A VERTICAL VIEW, with description of a HORTICULTURAL PLOUGH, originated by JOHN WILKINSON, Principal of the Mount Airy Agricultural Institute, Germantown, Pa.



The purposes for which this plough is designed, are: for tilling among trees and along fences, particularly thorn hedges. By shifting the front beam, which turns on an axis, formed of the front end of the main or stationary beam, this plough may be made to run after the rear or off side animal of the team, as desired, thus without the least difficulty enabling the ploughman to perform good and straight work as close to the fences or trees as he desires.

Any ordinary plough that is adapted to sward ploughing, and even one that is considerably worn, will, when altered, by attaching the shifting beam, answer well for this purpose, as its use will not be required but little, compared with other ploughs, hence a plough considerably worn will do as well as any.

The shifting beam is attached to the stationary one by framing into it, at right angles with it, a piece of timber of the same size, about ten inches long, with a semi-circular groove cut into it at the other end, so as to fit it to the stationary beam, to which it is attached by means of a piece of band iron 3 inches wide, ¼ inch in thickness, around the round part of the beam prepared for it. There are 2 braces of ½ inch round iron—one above and the other below—attached by the same bolt as the back end of the shifting beam, from which they extend back to the main beam, near the handle, where they are again attached by a bolt, which is removed when the beam is to be shifted, and the braces are brought back to a line with the shifting beam, when the beam is turned to the opposite side and the braces again bolted to their place.

This will be found a most efficient and useful implement, and one that every farmer should possess.

FESSENDEN'S FARMER AND GARDENER.—*C. W Saxton*, Agricultural Book publisher, New York, has just issued from his prolific press, the 10th edition of the above work, greatly improved and enlarged. The works of this distinguished author have long been considered among the standards in all that belongs to agriculture and gardening, and we are pleased to see this new edition; and not the less so, that it is gotten up in that superior style of excellence for which Mr. Saxton is so distinguished; and that, in its revision, it has been made to correspond with the latest improvements. The name of the author, *Thomas G. Fessenden*, is too familiar with husbandmen to require eulogium from us; but it may not be out of place to state, that no better authority upon any thing connected with agriculture, horticulture, or floriculture, need be desired. A man of education and taste, and devoted by sentiment, feeling, and habits, to these arts, as well as to the sciences connected with them, no one was better qualified than he to make, what he has made, an enlightened and reliable book.

ELEMENTS OF AGRICULTURAL CHEMISTRY AND GEOLOGY.—The above work is by *James F. W. Johnston*, and published by C. M. Saxton, Agricultural Book publisher, 123 Fulton street, New York.

As an elementary work, this volume will be invaluable to every one desirous of acquiring an insight into chemistry and geology, in their connection with agriculture. Without entering into tedious discussions, and minute details, professor Johnston, in brief, though perspicuous style, has unfolded the arcana of these sciences in their relations to the art of husbandry, and placed it within the power of the intelligent mind, to master the contents of his learned little book, without being oppressed by laborious study. He who may buy it, will rise from its perusal enlightened and refreshed.

THE FLOWER-GARDEN; OR BRECK'S BOOK OF FLOWERS.—This is a beautiful work of 336 pages, and we can honestly recommend it as being eminently worthy of the patronage of every lover of flowers in the Union. Its author is Mr. Joseph Breck, formerly editor of the New England Farmer, but now and for many years past a practical *horticulturist* and *florist*. Mr. B being a man of taste, and devoted in feeling to the culture of flowers, no safer guide than he need be sought. His description of the habits and qualities of the various tribes and varieties of the floral family, contained in his book, show that he wrote under the influences of candor and truth, while his directions as to their culture, prove that his teachings are the result of practical as well as theoretical knowledge. Such a book was much needed, and we commend it to our readers as an excellent and instructive work. It can be had of Messrs. *Cushing and Bailey*, Baltimore St. Baltimore.

COTSWOLDS OR NEW OXFORDSHIRES.—We refer those wishing to obtain breeding Ewes or Bucks, of the above breed, to the advertisements in our pages for this month—Fine animals can be procured this fall, and those wishing to purchase, will do well to engage early in the season.

Some Southdowns are also offered for sale.

Saxon and Merinos.—A gentleman of Spottsylvania Co. wishes to pruchase 100 or 200 sheep, a mixture of the above breeds—can any one inform us where they are to be had, and the price?

The article headed "CORN," in the Western Agriculturist, p. 121, was copied from this journal, and it would have been but fair that the "*American Farmer*," instead of "*Ex.*," should have received credit for it.

FLORAL DEPARTMENT.

Prepared by John Feast, Florist. 279 Lexington st. for the American Farmer.

The cold, rainy and clouded weather of the past month have prevented many things from being put out of doors, which required slight protection through the winter, as also the sowing of seeds, which should now be put in the ground as early as possible after the ground is sufficiently dry. Do not, however, sow any kind of seed while it may be wet, unless it can be covered with some rich dry light compost, suitable for such purpose. Such compost will hasten the progress of the plants.—Such management is attended with but little trouble, and amply repays for the time spent, especially will such be the case if the ground is stiff and moist. There is another advantage from having such compost; it will enable you to have different kinds of annuals, intended for blooming, early out of doors. They should be repotted in small pots, and then turned out in the borders. This gives a bloom of flowers several weeks sooner than seeds sown in the open borders. This treatment may only be limited to some of the best and most choice varieties.

Dahlias.—For a general bloom, plant out any time this month, in a rich, fresh loamy soil, and put down stakes for their support; have them properly labelled, and planted so as to have the greatest contrast of colors when in flower: do not put too many of the same shade together, if not intended as the grouping of colors.

Japan Lilies will do planted out this month; those intended to flower in pots, should have their proper sized pots for flowering.

Erythririas, Chinese Hibiscus, Justicias, Salvias, Oleanders, Helitropes, and other tender plants should be turned out into the borders, where they will give a profusion of bloom through the summer months, and be much less trouble, than if kept in pots. Such as require pruning, train to a proper shape to have a neat appearance; for this adds to beauty in connection with the flower, as specimen plants.

Greenhouse Plants, in general, may be planted out of doors, in some suitable situation, either imbedded in sand or placed on boards, to keep out the worms, give them plenty of room, and cut in such as require topping, in order to throw out side shoots. By using the knife freely, your plants will have a finer foliage, and a much more vigorous growth.

Creepers intended for covering.—Plant out such as *Calestygeias, Manettias, Clematises, Passifloras, Bassellas, Trapeolums, Thunbergias,* for trellises, and any place where a shade or sereen is wanted; they are all easily taken up in the fall, if wanted, except the annuals, and act as substitutes where permanent creepers are not desired.

Ericas, Daphnes, Fuchias, Calceolarias, and others are somewhat difficult to keep through the summer; and by some, annually lost, for want of proper attention in letting them get too dry, or giving water when not required, or by placing them in a wrong situation. Some keep them in the greenhouse all summer, but they require frequent syringing. I would prefer a tolerably shady situation, excluded from the scorching rays of the sun, except early in the morning; where plenty of air is at all times admitted, with proper attention, plants will seldom fail to endure through the summer. If the summer is unusually dry, they should be syringed every night and morning; this prevents the attacks of the red spider, so injurious to all plants.

Pelargoniums will now be in bloom; give plenty of air, and fumigate to keep down the fly: omit syringing when in bloom, as it destroys the flowers. All the tender bulbous roots in pots, that have done flowering, should be placed away and not too much water given them. Under the stage, or shelves are the best places for them, when the bulbs are maturing, which is shown by the decay of the foliage.

Roses in pots.—Plant out in the borders; *seedlings,* if large enough, pot in small pots, or put in frames to protect them when young. It is likely they may flower the first year with proper care, and show whether they are worth cultivating; few, however, out of large numbers, are worth keeping.

Gloxinias, Achemenes, Calceolarias, will begin to bloom soon, and make a fine display in the house; they like a shady situation, should not be over watered, but put in tolerably large pots, when they will flower most all the summer. There are but few plants more beautiful, and they should be in every collection.

All hardy plants, if in pots, and intended for out doors, should be put out in the borders; they require less care through the summer, and can be repotted in the fall, if wanted, but many plants cultivated in pots will stand the winter with a slight protection for a year or two, and become acclimated; they may, however, be cut down with the frost of an extremely cold winter, though seldom entirely destroyed. They mostly throw up strong vigorous shoots after being killed down in this way, and obtain a much handsomer appearance.

Grass Lawns should be attended to with more care than is generally bestowed upon them. Have all weeds, as plantain and such like weeds, taken out before the grass gets too high, and give a light covering of fine mould to nourish the roots of the grass. This is much better than any manure—it only fills your place full of weeds—and would recommend one bushel of soot in place of a load of manure, for that purpose; it will give the grass the verdure it should have. Frequent mowing is necessary, if you want the grass to look well during the season.

THE SHINNEY PEA IN ALABAMA.

MOBILE, Feb. 22d, 1851.

To the Editor of the American Farmer—

SIR—I have been promising myself for some time to respond to your call for testimony respecting the "Skinner" Pea, a few seed of which you were kind enough to send me last summer. You will observe that I have changed the name, but not without authority, having seen a letter from Mr. Chisolm to a neighbor of mine, in which he says, "I am the *Skinner* Pea man,"—named, I presume, in compliment to the able and indefatigable conductor of the "Plow, the Loom, and the Anvil." I got the seed late in the summer, and planted them just in the beginning of a very severe drought. I do not think there was a good "season" for three months; other vegetables and a great deal of shrubbery were literally burnt up, yet the Pea continued to grow, and bear as well or better under the circumstances than I could have imagined—convincing me, that with any sort of a chance, it would far excel any of the Pea family, in all their most essential qualities—It comes early into bearing,—six weeks—bears abundantly, and continues to bear until killed by frost. I could say more, but it would be taxing your time and patience. Your friend, &c.,

D. R. W. DAVIS.

CORN POUNDER.

ELLENDALE, VA. March, 1851.

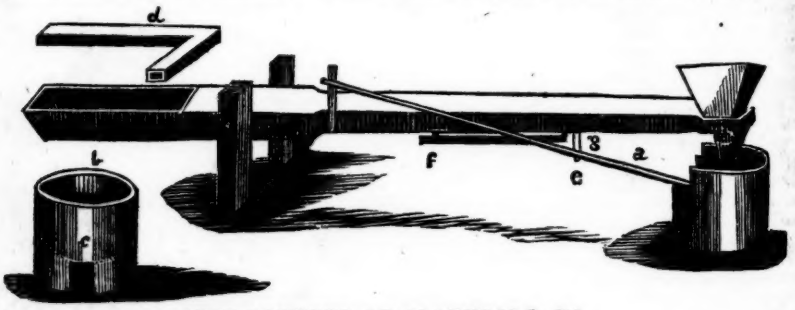
To the Editor of the American Farmer.

In answer to the "Appeal," in your last number, I will endeavor to give your correspondents some idea of the contrivance for pounding corn, they enquire about, accompanied by a drawing, which would have been more seemly, had not my pencils and brushes, which I have had no occasion to employ for some months past, fallen into the hands of my children, who used them to color, or rather discolor every engraving, and wood cut in volume and newspaper, they could lay their hands on; a process as fatal to the subjects as to the instruments. The painter, the milliner, and the naturalist would witness, in their performances, a combination and confusion of hues, to which the many colored robe of Joseph would be, as the sober suit of the quaker, to the varied tints of the rainbow.

As stated, in my first notice of this little machine, it was not of original invention by me. I took the hint of it from an old number of Skinner's American Farmer, for April 1820, to which I refer your readers for an account of it; but a little reflection satisfied me that this was susceptible of great improvement, with very trifling alteration;—in it, the beam is merely laid across a fulcrum, and playing loosely upon it, is lifted from it at every stroke of the pestle, which of course diminishes its force; and there being, moreover, little diminution of its size, along its entire length, its weight is too equally divided, to give it its proper effect at the point where it is needed; as would be the case with a maul if it were of the same size throughout.

These defects I remedied, by making the beam to move on an axis; and by reducing it from a foot behind the fulcrum, to within two or three feet of the pestle, where it is desirable all power, derived from weight should concentrate. I added too, a feeder, a small rake made of a strip of oak, into which wire teeth are inserted, and which is moved backward and forward by the rod *a*. Two pieces of hard wood are placed across the mortar, to support each end of the rake, and are made concave, on their upper edge, so that, in drawing to the centre, which it does not pass, the rake descends, and comes in contact with the corn, to carry it under the pestle, and in pushing back rises over it, and gets behind it, prepared to carry forward another supply. The teeth incline towards the centre of the mortar, which facilitates the rake's rising above the corn, as it retrogrades, and makes them less liable to catch in it.

Another improvement, I contemplate, when I have time, should this ever happen, for, at present, my only leisure is of nights and Sundays, is a method of getting rid of the meal as fast as it is made, for, by remaining in the mortar, it clogs the feeding, and deadens the force of the pestle. Could this be accomplished, the action would be more than double, and the quantity of work greatly increased. The mortar, marked *b*, is designed to show how this may, in my opinion, be effected—The entire bottom of the mortar should be of grated wire, as shown by the dotted lines, of proper fineness to allow the meal to fall through it, into a receptacle beneath; with the exception of a block of locust or other hard wood, *a*., better if shod with iron, to receive the blow of the pestle, falling on the corn that would lodge there—There would, probably, be agitation enough occasioned by the stroke, to cause the meal to sift through the grater; but, if not, a little ingenuity can produce it.



CORN POUNDER AT ELLENDALE, VA.

To such of your readers as have access to the volume of the Farmer alluded to, the *modus operandi* of this mill will be immediately apparent. To such as have not, it may be necessary to say:—the shaft or beam, is about 20 feet long, made from a tree that would square 18 or 20 inches and suspended at about one-third its length from the larger end, which is left rough;—in this is cut a trough, some 4 feet long, and as broad and deep as the wood will admit of, sloping at the butt, at an angle to the bottom, that will allow the water to pass off freely when the trough is full, and the beam descends. The pestle end of the beam, must be so weighted as to allow it to rise sufficiently for all the water in the trough to be discharged, as the weight of it carries it down, and the lower it sinks, the greater of course will be the action of the pounder. A spout as at *d*., must convey the water at right angles, to the trough, that it may pass over it while it is descending, and be ready to fall into it, when it resumes its horizontal position. This spout should be from 4 to 6 inches square, according to the supply of water, and, if in a line with the beam, may have an elbow in it, as shown in the drawing. Experiment alone, will show how near its mouth should approach the trough, and to this I must also refer your readers for the exact size of the latter, and the adjustment of the machine in general, as scientific rules are not applicable to such humble contrivances. The pestle should be of such length as would reach from its insertion in the beam, to the bottom of the mortar, when the former is at rest, and be of 2 inches diameter at bottom, tapering, gradually, to six at top. It should be shod with iron.

I could not give the exact proportions for this machine, as my own being experimental, is too small; being but 17 feet long, and of a log that would not square a foot, and supplied by a spout 3 inches square. Where there is plenty of water, the size, and of course the action may be much increased, and as this is the case with me, I intend some of these days, to make another, which will be 25 long from a log to square 2 feet. The trough will not be lengthened in this proportion, as it will gain in depth and breadth from the size of the log, and it is desirable to keep the weight as near the end as possible.

Where there is deficiency of water, the movement of the machine would be too slow, if not proportioned to the supply.

It may be objected by your readers, that I have put the cost of this contrivance too low, at $5, and it may cost them $10; but necessity has taught me many expedients, while my knowledge of mechanics, and of the use of tools enables me to direct such matters, and to perform much of the work myself; so that they cost me less than would be the case with those who have to employ expensive machinists for these purposes. One of my laborers got out my beam, with a narrow axe, in half a day; a hollow log, which I lined inside with ½ inch poplar, made my mortar; the axle of an old ox cart furnished the pestle, ready ironed to my hands; my beam turns on a shaft from "a patent straw cutter" that never did me other service; and the dam was a necessary appendage to my barn-yard, and but a small affair. Two stout locust posts, to sustain the beam, and their insertion in the ground, were trifling matters, and the feeders, I made myself, in a couple of hours. For this small outlay, I have had 350 lambs kept well supplied this winter with food, which was being prepared during the day, for the evening, and during the night for the morning, while the shepherd was attending to other duties;—have meal for my family, when not convenient, as is frequently the case, to send to mill, by supplying it with shelled corn, and passing it, after it is pounded, through a fine sieve; while the residium is homminy, by no means to be condemned.

I wish some of your subscribers would try my wire gate, described by me some time since, in your journal. After the severe proof I gave it, as an outside gate, in a situation where it is liable to constant use and abuse, I put up one to my barn-yard, where it acts like a charm, upon horses, oxen, cows, cattle, and hogs, confined there, and strongly tempted to transgress, by desire to participate in fodder, feeding to a flock of sheep from which this gate divides them.

It is light, durable, cheap, and ornamental. I use oak or pine studding, without planing, for the frame, to which white-wash adheres better than if the wood were smooth, and gives a more appropriate character for outside work than paint.

Yours, W. B. B.

☞ We have received from our correspondent a further description of the Pounder, and our engraver has endeavored to engraft on the drawing, the improvements suggested in the annexed note:

"My ploughs being all started, and my stock put to pasture, I gave an hour or two, the other day, to my Corn Pounder, adding another spout, which about doubled the quantity of water applied to it, and increasing the capacity of the trough which receives it. This, of course, enabled me to add to the weight at the pestle end, where there is a box, omitted in my drawing, but which, if not too late, your designer may add—and in which stones, or other weights, may be laid, until the proper balance is obtained. I have thus doubled its force, as well as its velocity, and now have, from it, five bushels of cob and corn meal in the 24 hours.

I added also a contrivance for stopping it, conveniently. A stake, with a hole in the end *e*, through which a staple passes, to connect it with the beam, and which is held up by a hook and staple at the end *f*. By loosening this hook, when the machine is in motion, the stake falls to the perpendicular, as the beam rises, and as it descends prevents it from resuming the horizontal, and the trough from filling—a piece inserted at *g*, prevents the prop from swinging too far forwards. This your engraver might also introduce. Yours, W. B. B."

FATTY SUBSTANCES—*Dana*, than whom the world does not contain higher authority, says:—

"All fats and oils exposed to air give off a great quantity of carbonic acid, and end by becoming acids. As their ultimate elements are the same as those of plants, it may be inferred, that under the influence of growing plants, fats and oils are decomposed and become vegetable food. But there is another action of fats and oils on silicates; they not only let loose the alkali of silicates by the carbonic acid, which they evolve, but the oils now become acids, immediately combine with the alkali, and imperfect soaps are formed. Soaps are truly chemical salts, and hence we have at once a clew to the action of oils and fat."

The burning of bones—if they be *fresh*—destroys in every 100 lbs. about 33 lbs. of animal matter, which is a most powerful fertilizer, and, to that extent, is their value lessened by the process of burning.

The authority of *Dana* is sufficient to settle the above, or any other question of a chemical nature, with all who know his vast acquirements. To sustain his views, however, we will copy those of professor *Jas. F. W. Johnston*. He says:—

"The refuse of fish oils,—of the fat of animals that has been melted for the extraction of tallow—of skins that have been boiled for the manufacture of glue—horns, hair, wool, (woolen rags,) and all similar substances, when made into composts, exercise, in proportion to their weight, a much greater influence upon vegetation than any of the more abundant forms of vegetable matter."

The use of *oil* as manure, is of the most ancient origin; *Cato*, 150 years before the Christian era, strongly recommended its application; so did *Columella*, *Virgil* and *Pliny*. But why should it not operate as manure? It is rich in three organic elements, *carbon*, *oxygen* and *hydrogen*—it once possessed life—and, therefore, has the power to reproduce life. It is susceptible of being decomposed by the alkalies of the earth, and of thus becoming a life-sustaining principle of vegetation.

Again—to come down to later authority, *Cuthbert W. Johnson*, says:—

"Train *oil* has been sometimes used as a manure, *and is a* POWERFUL FERTILIZER."

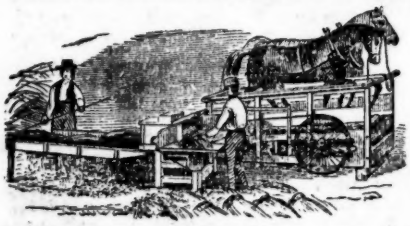
Editor of the American Farmer.

Potatoes.—Get in your crop of Irish Potatoes, between the 1st. and 15th. of the month. As to the mode of culture, see our directions in our March number. All that is necessary to success is there pointed out.

EMERY & CO'S.

New York State Agricultural Society's First Premium

RAIL-ROAD HORSE-POWER & THRESHER.



THE attention of the farming public is solicited to the newly improved Rail-Road Horse-Power, as now made and offered to them by the subscribers.

Having been long engaged in the manufacture, sale, and introduction of agricultural machinery, they have had ample opportunities to ascertain the wants of the farmers as well as the merits of the various machines now in use—they have endeavored to better adapt such as they manufacture for the purposes designed, and having paid more attention to these Horse Powers than almost all other implements together, they flatter themselves that they have succeeded in so improving the endless chain power as to do away the strong prejudice against its use, and at the same time so adapted it to a greater variety of uses that no farmer of any considerable extent will do without one when once having seen them in operation.

As their power is so dissimilar to those chiefly made and sold by them previous to last season, and from any others now in use, that they deem it an object to themselves, as well as an interest to farmers, to give a description of its principal parts with cuts, as follows:

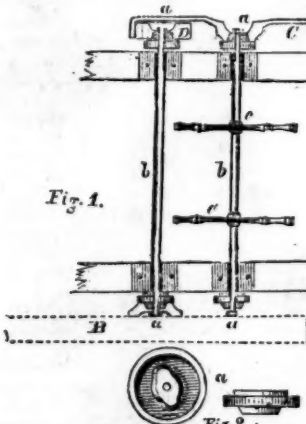


Fig. 1.

Fig. 2.

Fig. 1 represents the top view of the running geer with the flooring off. A, A, the sills, supporting the bearings and main shafts. B the band-wheel, 3 feet diameter, connected to shaft. C the converge geer wheel connected to shaft D, the pinion working inside the converge wheel and connected to shaft. a, a, a, a, the ends of the main shafts with couplings and nuts attached. b, b, the two main shafts of the power. c, c, the reels (iron) on the forward main shaft which supports the endless platform in its revolution at the forward or upper end of the power. These reels, as also the couplings, are all fitted firmly and permanently to the main shafts as represented.

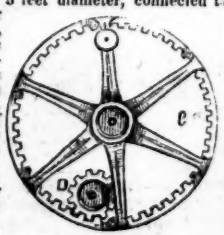


Fig. 3.

Fig. 2. a, represents a face and edge view of the couplings which are fitted permanently to each end of each main shaft, (enlarged.)

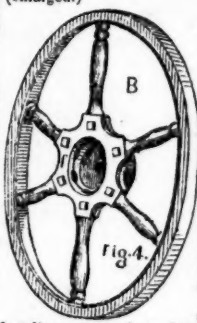


Fig. 4.

Fig. 3. e represents a side view of the converge wheel with a concave or sunken hub and fitted to the shafts and couplings a, a, a, a, and confined with a nut or screw. One of the arms of this wheel is provided with a projection plate to receive a wrist pin for driving a pitman, often convenient in sawing wood, churning butter, etc., etc. D represents a side or face view of the pinion, which is about 1-4 the diameter of the converge wheel, and working into it; this has also a concave hub and fitted to couplings and confined by a nut, the arms of the converge wheel passing over it when in operation.

Fig. 4. B represents a face or side view of the band wheel, three feet diameter, the hub of which is formed of two iron plates so made as to form cavities to receive the spokes as represented, and when bolted through the spokes and plates forms a strong and substantial wheel. The back plate is also concave to receive a nut, fastening and fitting also to each and all the couplings.

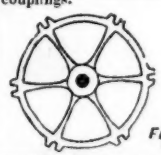


Fig. 5.

Fig. 5 shows the side view of one of the reels—2 of which are used on the forward main shaft. The small rods of the endless platform, fitting in the cavities as they revolve, thereby giving motion to the reels and shaft, to which they are firmly and permanently fastened.

The diameter of these reels is such that they receive from the platform, with the ordinary walk of a horse, about fifty-five revolutions per minute, which it communicates to the converge wheel outside the frame.—This wheel in its turn communicates its motion *in the same direction* to the pinion working into it, which pinion, being only one-fourth the diameter, receives two hundred and twenty revolutions per minute—the band wheel B being attached to the opposite end of the pinion shaft as represented. This wheel being three feet diameter gives sufficient speed for threshing, sawing wood, grating apples, ginning cotton, cutting and feed, etc., etc.

When the power is to be used for churning, (with band,) driving grindstones, corn shellers, or when a slower motion is desired, the band wheel can be attached to either end of the reel shaft, at fifty-five revolutions per minute. Should it be desirable to have a still slower motion for elevators, hay presses, driving paddle wheels for small boat, instead of propelling them by manual labor on many of our streams and lakes, in the wood and lumber business, etc, all that is necessary is to put the pinion on the reel shaft and the converge geer wheel on the other, working into it, and with an increased power in proportion to the decrease of motion, the horse walking the same speed in all cases.

The advantages of these arrangements are too plain to require comment—only one or two need be mentioned, one of which is, the removing the whole of the geering from under the horses and from the dust and dirt always about the machines, where it may, if desired, be boxed up and kept perfectly clean, requiring very little oil or care to keep them in order. There is no possibility of breakage, or wear, or slipping of gearing, as is unavoidable in all other powers which we have heretofore sold or seen.

The platform, small shafts, rail-tracks, and wheels, are similar to those made and sold by us for several years past. These improvements having been tested in upward of two hundred Horse Powers, made and sold during the last season, and invariably given good satisfaction, and had the preference over any we have before made, we have no hesitation in commending them to the favorable notice and trial by all farmers or others desiring a cheap, efficient, and durable Horse Power. For further particulars see catalogues of "The Albany Agricultural Works, Warehouse and Seed Store," furnished gratis on application to

EMERY & CO.,
Ap. 1-2t 369 and 371 Broadway, Albany, N. Y.

GUANO! GUANO!!

400 TONS PERUVIAN GUANO, late importation. Also, Patagonia Guano and Bone Dust—Building and Agricultural Lime. For sale in quantities to suit purchasers by WILLIAM ROBINSON,
Mar. 1. No. 4 Hollingsworth st., near Pratt st. Wharf.

DOMESTIC ANIMALS AT AUCTION.

THE postponed yearly sale of FULL BRED SHORT-HORNS AND IMPROVED DAIRY STOCK, consisting of about fifty head, will come off at my farm on Tuesday, June 24th, 1851, at 12 o'clock, M. I shall dispose of all the improved Dairy Stock, which is composed of the finest Short horn, with a slight cross of Amsterdam Dutch, which some writers say was part of the original ingredient which composed the improved Short-horns.

I am now breeding the Short horns, Devons and Ayrshires, each separately and pure, which, owing to the limits of my farm, make it necessary to confine myself to those three breeds. By the awards of the State Agricultural Society, the American Institute, and my own County Society, (with the exception of last year, when I was not a competitor at either,) it will fully appear that I have been a very successful exhibitor. The cow which won the FIRST PRIZE as a milker, at the American Institute last year, was bred by me, and composed of the above alluded to Dairy Stock. Several of the Bulls got by Lamartine will be of the most appropriate age for efficient service the coming season. All Cows and Heifers old enough, will be warranted in calf at the day of sale, by my Imported Bull "Lord Eryholme," or my celebrated Bull "Lamartine."

I own two thorough bred Devon Bulls; one the celebrated old Major, the other, one and a half years old, imported by me from Devonshire. One of the above animals will be sold—which, I have not as yet determined.

A full Catalogue, with the pedigree of each animal, will be published in due time, with minute description of sale, &c.

I also have a number of Suffolk Sows, in pig to my imported Boar, most of the progeny of which will be old enough to dispose of on that day.

I also have about 20 South Down Ewes, most of which I imported from the flock of Jonas Webb, and now in lamb to my imported Buck "Babraham." Some of their Buck Lambs will be offered at auction on that day.

This sale will not only offer an opportunity to obtain stock from my previous Herd, but will also enable persons to procure calves from my imported Bull, lambs from my imported Ram, and pigs from my imported Boar—all of which animals were recently selected by me in person, when in England.

The mode of warranting the Cows and Heifers in calf, is this: in case they prove not to be so, it shall be optional with the purchaser, on his *certificate of that fact*, either to receive from me $35, (say twenty-five dollars,) or to send the cow to my farm, and I will keep her the proper time (free of expense) to have her got in calf to either of my Bulls, which he shall choose. I will give $25 for any heifer calf from either of the Cows or Heifers sold at the sale, delivered on my farm, at two weeks old.

Stock purchased to be sent a distance, will be delivered on shipboard or railroad in the city of New York, free of risk or expense to the purchaser.

Persons living at the south, in a climate to which it would not be well that stock should be transported, at that hot season of the year, may let such animals as they may purchase, remain with me until the proper season, and I will have them well taken care of, and charge only a reasonable price for their keep. One of my objects in breeding improved domestic animals, is to assist in distributing them throughout the Union, deeming it one, if not the most important feature to promote profit to the cultivator of the soil, and to benefit the consuming country at large.

All communications through the Post, please pre-pay, and I will pre-pay their answers, and also a Catalogue if required Catalogues will be to be had at all the principal Agricultural Warehouses and offices of the principal Agricultural Journals, on and after the 1st day of June next. Persons wishing to view the stock at any time will find my superintendant, Mr. Wilkinson, to give them the desired information when I am not at home.

Dated this 4th day of March, 1851, at Mount Fordham, Westchester County, eight miles from the City of New York, by Harlem Railroad.

Ap. 1-3t L. G. MORRIS.

Postscript.—I decline selling any stock by private sale, so as to offer the public all the animals I have to part with, without having any previously selected from the herd, and all animals offered will be positively sold.

J. T. WATKINS,
FEATHER BEDS,
CURL-HAIR MATTRESSES,
FURNITURE AND VARIETY STORE, &c.
No. 47 South street,
Between Lombard and Pratt street,
Ap. 1-1yr *BALTIMORE.*

New and Valuable Plants for the Nursery, Garden and Pleasure Grounds.

B. M. WATSON, Old Colony Nurseries, Plymouth, Mass., offers for sale a very complete assortment of PLANTS, including all those of recent introduction, consisting, in part, of Pear, Quince, Paradise, Mahaleb, Plum, Cherry and Apple stocks at lowest rates.

Young Trees, 3 to 5 feet high, mostly at from $5 to $12 per 100 of the finest deciduous sorts for nurseries or young plantations, and Evergreens, from seed, from 1 to 1½ feet.

Dwarf Pear, Apple, Cherry, Apricot and Nectarine Trees, in a bearing state, or nearly so, of the very finest sorts, at the usual rates.

Standard Trees of the same.

Strawberries, in 20 fine varieties, mostly at $1 per 100; Boston Pine, $1; Iowa, $2; Burr's New Pine, $2; Jenney's Seedling, $1.50; Richardson's Seedlings, 50 cts. per doz, very fine.

Ornamental Trees and Shrubs in great variety, including many new species, finely grown. Evergreen Trees and Shrubs and rare Pines in great variety.

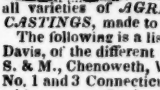
Calestegia Pubescens.—This new Hardy Climber, lately introduced from China by Mr. Fortune, proves perfectly hardy in New England, having stood two winters in the ground here without any protection whatever. It is covered with delicate double rose colored blossoms all summer, and is the most brilliant and attractive flower of recent introduction. Plants $1 per pair—Tubers for 100 plants $5—for 50, $3, which will be sent by mail or express, at any time.

For bedding out, Verbenas, including Reine du Jour, Robinson's Defiance, Iphigenie, St. Margaret, and 20 others, $1.50 per dozen. Fuschias, Carnations, Scarlet Geraniums, Heliotropes, Chrysanthemums, Runners, &c. in great variety.

Priced List sent (post paid) on application. Carriage of all packages paid to Boston.

Plymouth, Mass. Feb. 14, 1851.

Orders for any of the above, received by the Editor of the American Farmer. Mar. 1.



C. H. DRURY, *Hollingsworth street corner of Pratt—Head of the Basin* — having completed his establishment with Foundry connected, for the making his own Castings, is prepared to furnish all varieties of *AGRICULTURAL IMPLEMENTS* and *CASTINGS*, made to pattern of the best material.

The following is a list of PLOWS kept constantly on hand: Davis, of the different numbers, for wrought and cast shears, S. & M., Chenoweth, Wiley, 2 and 3 furrow, No. 0, Hill side, No. 1 and 3 Connecticut—Beach Improved or Posey Plow, with common Davis cast shear—Self-sharpener or wrought shear—Corn Cultivators, plain and expanding—Tobacco do.—Wheat Fans—Corn sheilers with double hopper—Old Vertical and Virginia sheller—Harrows—superior Pennsylvania made Grain Cradles—Revolving Horse Rakes—Cylindrical straw Cutters, &c. &c. Horse Power *GRIST MILLS*, a very useful and saving article, and coming into general use. *HORSE POWER AND THRESHING MACHINES*, of these I need not say any thing, as wherever they have been in use any time, they are preferred to all others.

C. H. D. will this year make a smaller size Power & Thresher, (price of Power, $100, Thresher, $50, Band, $10, or when taken together, complete, $150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. jel

WILLIAM HARRIS,

GUN, RIFLE AND PISTOL MANUFACTURER, No. 65 South st., 1 door from Pratt st., Baltimore.

W. H. keeps constantly on hand a large assortment of Bird and Ducking Guns, (double and single barrel;) Six barrelled Revolvers; Rifles made to order; Dupont's Gunpowder; Powder Flasks; Bird Bags; Shot Belts and Pouches, and many other articles necessary for Sportsmen. Repairing done at the shortest notice, and with neatness. Dec. 1-6m

GUANO—GUANO.

100 TONS PERUVIAN GUANO, imported in the barque *E. H. Chapin*, and pronounced by Dr. Higgins, State Chemist, to be a very superior article. Dr. David Stewart also analyzed this cargo, and says that it contains more ammonia than any specimen of Guano that he has ever tested.

Also, PATAGONIA GUANO, BONE DUST, Building and Agricultural LIME, for sale at the lowest market rates by WM. ROBINSON, No. 4 Hollingsworth st.

Ap. 1 near Pratt st. wharf, Baltimore, Md.

SINCLAIR & CO.'S
PREMIUM
Agricultural Implements
For May and June.

THE following IMPLEMENTS are made on the most approved *Southern* plan, and excellent both as regards workmanship and materials, viz:

(☞ In reference to Premiums, our wares are *covered with honors.* ☜)

Cultivators.

Corn, Tobacco and Cotton—price $4.50 to $6.50.

Plows.

2 and 3 furrow Gang, for Cultivation and Seeding, $5.50 a 6.50; ditto most approved for Seeding, Cultivation and Flushing.

Harrows.

Hinge and Expanding, Common Drag and Double Hinge.

Rollers.

For Garden and Field use—$20 to 50.

Drills.

For Corn, Peas and small Seed—$9 to 20.

Rakes.

Horse and Hand, superior and common finish.

Forks.

Wood and Steel, and HARVEST TOOLS generally.

Grain Cradles.

Iron and Wood braced—$4 a 5.

Hoes.

Cast-steel Plantation and Garden, assorted sizes.

Reaping Machines.

McKeever's Patent Premium Machines—warranted the best in use.

Also for sale and in preparation—

WHEAT DRILLS—With late improvements, and warranted—the most simple and effectual in the U. States.

THRASHING MACHINES—4 sizes—$35 to 60.

HORSE POWERS—Premium Lever, 4 sizes and sorts—$100 to 135. Ditto Railway—latest improved—$75 to 100.

CORN AND COB CRUSHERS—Most approved —$30.

MILLS—Cologne and French Burr—$100 a 135.

STRAW AND FODDER CUTTERS—With or without Corn-stalk Lacerators.

CORN-STALK CUTTERS AND GRINDERS —$30.

CORN SHELLERS—10 sorts, for hand and horse power.

FANNING MILLS—Latest pattern, with valuable improvements.

IN STORE—A large assortment of Churns, Vegetable Cutters, Saussage Cutters and Stuffers, Apple Pearers, Bull-Rings and Horn Nobs, Cow Milkers, Nest Eggs, Cattle Ties, Halters, Chain and Rope Traces, Scythes, Snaths, Ox Yokes, Plow Harness, Hay and Straw Knives, Grindstones, hung complete. Also a large and general assortment of

GRAIN, GRASS AND GARDEN SEEDS.

R. SINCLAIR, JR. & CO.

may1 No. 58, 60 and 62 Light st. Baltimore.

FOR SALE.

20 BUCK LAMBS of the COTSWOLD or NEW OXFORDSHIRE BREED, deliverable in Baltimore after 1st August, prox.

For several years past, great care has been given by the subscriber to the selection of his breeding Ewes, part of which, and the Rams, have been selected from the celebrated flock of Clayton B. Reybold, Esq. of Delaware. Price $15 to $20, according to choice. For further particulars enquire of S. Sands, editor American Farmer, or HENRY CARROLL,

may 1-5t* Westerman's Mills P. O. Balt. Co. Md.

New Oxfordshire Sheep

THE subscriber will have for sale, deliverable in August and September next, about 25 Lambs, of the *New Oxfordshire*, or Cot-wold breed of Sheep; the subscriber in person selected his breeders from the flock of *Clayton B. Reybold*, Esq. at a high figure, and feels confident that his flock is unsurpassed by any other in Maryland. Price $15 to $20. Enquire of Mr. *Sands*, at the office of the "Farmer," who will receive orders for them, or to

WILLIAM JESSUP,

near Cockeysville, Balt. Co., Md.

Also for sale, a fine BUCK, of the above breed; the subscriber having obtained a fresh cross for his flock, has no further use for him—he is 3 yrs. old this spring—price $40.

May 1-tf

New Oxfordshire Bucks For Sale.

THE subscriber has a number of yearling and two year old BUCKS, which he will sell any time when called for, and has no hesitation in saying this breed of Sheep are superior to all others for large carcass, heavy fleece, early maturity, constitution; and defies all competition with other breeds for profit. This flock (which has been bred from some of the best ever imported) is so well known they need no further description than to say, that the sire clipped 18 lbs. of washed wool, and weighed 361 lbs. alive. Gentlemen are invited to call and see for themselves, or communicate by mail. Direct to

CLAYTON B. REYBOLD, Delaware City, Del.

Orders received for the above by Mr. Sands, at the office of the American Farmer, who will attend to their shipment.

May 1-5t

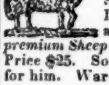
Full Bred Cotswold Bucks For Sale.

20 FULL BRED COTSWOLD BUCKS, 2 years old, bred from Col. Ware's best stock, for sale—price from $30 to $50, according to selection, put up in crates ready for transportation. Application to be made to

CHAS. CARROLL, Daughoregan Manor, near Ellicott's Mills, Md.

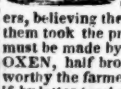
Or to Sam'l Sands, at the office of the American Farmer.

☞ The North Carolina Star, at Raleigh, and the Lancaster, Pa. Intelligencer, will publish the above four times, and send bills as above. May 1-5t



FOR SALE—A splendid SOUTH DOWN BUCK, one of the *heaviest* and best made Sheep of his species. Pedigree undoubted.—His sire cost $50, in 1847, as a premium animal, at the Philadelphia Fair. This Buck is also a *premium Sheep* at Maryland Shows. Enquire of S. SANDS. Price $25. Sold only because his owner has no further use for him. Warranted sound and healthy. May 1

South Down Lambs.



THE undersigned has for sale 20 or 30 South Down Lambs, nearly full blooded, (say 7-8) raised by that famous breeder, Mr. Sidney G. Fisher, on his farm in Cecil Co., which he offers to the farmers for breeders, believing they cannot obtain a better stock, as some of them took the premium at the last cattle show; application must be made by the 10th of May. Also, some half DEVON OXEN, half broke, between 2 and 3 years old. They are worthy the farmers' attention. For further particulars apply, if by letter (*post paid*) to WM. L. BATEMAN,

May 1-tf 61 S. Calvert street, Baltimore.

Leached Ashes,

OF THE BEST QUALITY, warranted genuine and unadulterated, for sale in quantities by

GRISCOM & BURROUGHS,

Ap. 1-6t* City Block, Fell's Point.

Osage Orange Seed.

THE subscribers have just received a supply of fresh, well saved Osage Orange Seed, warranted to vegetate freely, *not* being taken from the fruit by the common process of boiling. Price $1 per quart, or at a reduced rate by the bushel.—Printed directions furnished for its culture.

Also, Honey Locust, Yellow Locust Seed, &c.

J. M. THORBURN & CO.

may 1-1t 15 John street, New York.

California Flower, Shrub and Tree Seeds.

THE subscribers have just received from the hands of the collector nearly 50 varieties of the above, all fresh and in good condition. No other country in the world, with a temperate climate, presents such an array of floral beauties as do the western slopes of the Nevada Hills, where the present collection was made, and it is believed that as regards novelty and beauty, no previous selection has exceeded the one now offered.

The Seeds are put up in neat small packages of 47 varieties, with descriptive catalogues, and can be sent to any part of the United States or Europe, by mail if desired.

Price for the entire collection $2.50.

J. M. THORBURN & CO.

may 1-1t 15 John street, New York.

Seed and Agricultural Warehouse,

NO. 29 MARKET STREET, PHILADELPHIA,

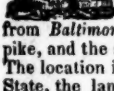
WHERE the subscriber has on hand an extensive assortment of GRASS and GARDEN SEEDS of his own raising or recent importation, and warranted to be as represented.

He is also manufacturing all the most approved AGRICULTURAL IMPLEMENTS, amongst which he would call the attention of farmers to a NEW ARTICLE OF PLOWS, of his own invention, the Cast-steel Extending Point *Self-Sharpner Surface and Subsoil* PLOWS, which for durability and ease of draft, is yet unequalled. The great advantages these Plows possess over all others, are their peculiar construction, and the substitution of cast steel in the place of cast iron, which only wants to be seen to be appreciated.

He has all Fruit and Ornamental TREES, GUANO, POUDRETTE, BONE DUST, SODA, and all the most approved Chemical Fertilizers, which will be sold on the lowest prices by

May 1-2t C. B. ROGERS.

A GOOD FARM FOR SALE.



THE undersigned will sell at auction on *Thursday*, the 8th day of May, if not previously sold at private sale, his farm situated 5½ miles from *Baltimore*, half a mile from the York turnpike, and the same distance from the Hillen road. The location is one of the most eligible ones in the State, the land good, recently limed, and in good condition, being occupied at present as a successful dairy farm. The produce of 50 cows are daily sold, at a good price. The COWS, nearly all of which are superior, will also be sold. Springs of the purest water abound throughout the farm, through which two streams pass, affording at all times never failing supplies of water to each field. The situation is most desirable, being in the midst of a respectable neighborhood, surrounded by places of worship, and Academies, commanding a view of the Chesepeake, and remarkable for its good health. The dwelling is roomy and comfortable, the barn and stabling commodious, and well adapted to their purposes, with a pump of the best water in the barn-yard. The tract consists of 134 acres, 70 acres of which are in a high state of cultivation, the rest in wood.

FREDERICK SCHETTER.

may1 CANNON, BENNET & Co., Auctrs.

AMERICAN FARMER.

BALTIMORE, MAY 1, 1851.

A valuable Essay from Mr. Ruffin will be found in this No.

ADVERTISEMENTS.—We are compelled again to issue another supplementary sheet, to meet the demands of those having stock, implements, machinery, trees, plants, manures, &c. to offer to the farmers and planters of the middle, southern and western states—The value of this mode of communicating with the agricultural community, is beginning to be appreciated—and when it is considered that our journal circulates mainly amongst the most thriving and improving, as well as the most intelligent classes of these sections of country, it is no wonder that those who have any thing of interest or value to present to the public, should embrace this medium of reaching them—A manufacturer at the North, who forwarded us an advertisement some time since, on sending another for insertion in the Farmer, remarks—"We wish to advertise more with you, for we find it for *our* advantage to do so. Please send us your paper for this year," &c.—Another manufacturer writes us: "I have received numerous enquiries from your subscribers, and believe it will advance our interest to advertise extensively."—Not an advertisement which appears in our journal, but is, perhaps of equal value to the reader with any thing else we publish; but the quantity of interesting matter which presents itself for insertion, and our desire not to materially abridge the space allotted for such, induces us, though at very heavy additional cost, to resort to supplementary sheets, which, our readers will have noticed, we have availed of so frequently during the past year.

CAPON SPRINGS.—Our readers are particularly referred to the advertisement of the proprietors of this watering place, which will be found in our journal to day. The "*Mountain House*" is at once one of the most magnificent and massy structures in the country, being about 425 feet on the two fronts, and capable of accommodating 700 to 800 persons. The *dining room* is about 225 feet long, by 38 feet in width, and will seat from 650 to 700 persons at one sitting. The ceiling 16 feet high, is supported by massive oaken columns, surmounted by tasteful gilt wreaths, lighted and ventilated by French casement windows. The *ball room* is 80 by 38 feet, supported by white columns and pilastres, surmounted also by gilt wreaths. The main stair-way is solid oak, of the most beautiful workmanship. The front *Portico* is 170 feet long, by 16 feet wide, supported by brick columns, rough cast, with iron railings in front. The *Ladies' Parlor, Gentlemen's Sitting room, Reception room*, office, billiard room, and bar room, are all upon corresponding scales of grandeur. The kitchen is so arranged as that it can conveniently prepare the viands for 2500 guests.

Attached to the establishment, is a splendid *Bowling saloon, rifle and pistol gallery*, and *archery*. The

stabling, which is on an extensive scale, is at a convenient distance.

The *Bathing establishment*, which has been recently completed, as we learn, *by the Trustees on the part of Virginia*, is said to be truly *magnificent*, being 300 feet in length, combining all the most approved arrangements for *cold*, *warm*, *plunge*, and *shower baths*, with a convenient dressing room attached to each bath.

The proprietors intend to make it a *Southern Watering Place, of the first class*, worthy of southern patronage.

Eighteen months since, the grounds on which these vast structures stand, were covered by forest trees, which, by the go-ahead energy peculiar to our people, aided by one of *Page's circular saw mills*, have been made to give place to the magnificent edifices, which we have but briefly sketched. The home of the oak, the hickory, the birch, the sycamore and the ash, in a few short months, has been thus transformed into the seat of elegant refinement.

Baltimore Co. Lime.—Within the past month, we paid a visit to *Texas*, Baltimore county, on the Baltimore and Susquehanna rail road, and spent some time in examining the limestone quarry of Messrs. *Fell & Robinson*, and others in that vicinity. Although hundreds of travellers are daily passing this mine of wealth, few of them are probably acquainted with the extent of this deposit of the finest limestone in the world—There is an area of about nine acres, which is of more value, we think we are warranted in saying, in the effects to be produced therefrom, by its power of creating wealth, than any similar extent of territory of the gold regions of California. Messrs. F. & R. are very extensively engaged, with a number of kilns and a large force, in furnishing lime for agricultural and building purposes, and such is the increasing demand for it, that the rail road company is not able to furnish transportation for the supply required. The Baltimore Co. lime is, by far, a purer lime than any other sold for agricultural purposes, and we are gratified to find by the examination of these quarries, that the supply is almost inexhaustible.

The Crops.—The wheat and grass crops are almost universally represented as very promising, and if the season continues favorable, and no untoward casualty prevents, an unusually large crop will be harvested.—The cold, wet weather during most of the past month, retarded very much the preparation and planting of corn, and other spring crops! We think that the fruit has not been materially injured by the frosts of April.

We hear complaints of injury by the fly to the tobacco plants.

Manures.—The compost of bones, flesh, plaster, &c. which Mr. Horner advertises, ought to make a good manure to push the corn forward where the weather has put the planting back—we hope it will have fair a trial.

Osage Orange Seed.—We have frequently been asked where this seed could be obtained. We would refer enquirers to the advertisement of Messrs. Thorburn & Co. The California Plants they advertise, are worthy the notice of florists.

Rye in head.—A stalk of Rye, 4½ feet high, in head, pulled on the 28th ult. has been left at our office—raised on the farm of John H. Miller, Esq., near Ellicott's Mills.

ESSAYS
ON
Various Subjects of Practical Farming.

BY EDMUND RUFFIN, of Va.

On Harvesting Corn-Fodder—Different Methods Compared.

The gathering of the leaves of Indian corn, to cure for provender, or "pulling fodder," (in common parlance,) is one of the oldest and most general practices in the farming of lower and middle Virginia. It was established in early times, when no hay was made. Even now, so rare are meadows, or artificial grasses for mowing, that much the greater number of our farmers use no kind of long forage for horses and mules, except corn-fodder—and in fewer cases, oat straw. Hence, the usual fodder crop is indispensable on almost every farm, and there is rarely an omission of the leaves of the whole corn crop being stripped. That operation, together with the subsequent "cutting tops," or all the stalk above the ears, (which follows immediately after the stripping off the lower leaves,) and the curing and stacking of both, usually give full occupation to nearly all the laborers of every farm during all September, or for 4 or 5 weeks, whether beginning earlier or ending later than September. This is the very time when sickness is most common on every place subject to autumnal or malarious diseases; and when sickness is most apt to be produced, even in healthy places, by improper exposure. And of all the ordinary work on a farm, none requires more exposure of the laborers, and risk of injury to their health, than the usual and light labors of pulling and securing fodder. Dews cannot be avoided, and the laborers are made more or less wet by the dew on the corn and the tall grass, every morning. Again, the crispness of the cured fodder forbids its being handled when dry, as it would lose much by crumbling, and also be less manageable. Hence the necessity for the general usage of bringing together and stacking the cured fodder mostly in the night, for the benefit of damp air. This exposure to night air is worse for the laborers than that to the heavier dews of the mornings; and both kinds are the more dangerous to health, because the light labor, and the lazy movements belonging to it, do not give enough exercise to counteract the outward dampness by the brisk circulation of the blood.

Having abandoned this practice, and never having attended to its details when formerly pursuing it, I am not qualified to estimate the cost of obtaining this harvest, or the usual net profit (if any) on the operation. But if carefully observed and fairly estimated, I think it would be found, on the general average of good and bad crops of fodder, and of good and bad weather for securing them, that there is very little net profit, in general, and in many cases the value of the secured crop is less than the cost of labor.

But besides the cost of labor, there is another and perhaps more important expense incurred in the usual time and mode of getting fodder, which is not commonly known or even suspected by many farmers. This is, in the lessening the due filling, and size and weight of the grain, by removing the green leaves. The leaves of a plant serve to gather food from the atmosphere, and also to prepare, in

the passage through its vessels, the sap received from the roots—so that the leaves act for the same general purpose, and are as necessary to the sustenance and life of the plant as the roots themselves. So long as the leaves of corn are green and succulent, and have not begun to fade, and whether below or above the ears, they still continue to furnish nourishment to the grain, and are necessary to its perfect filling. As soon as this service is completed and the grain can draw no more nourishment, then the leaves begin to fade, and soon after, the plant dies. Within the limits of this very short state of transition from continuing growth to death, it is true that fodder might be pulled with safety to the grain. But there would not be half time enough for the harvest, and moreover, it would then have lost most of its ordinary value, by standing so long. The general rule for beginning to pull fodder, is when the outer ends of the grains of corn have become depressed, or indentations are formed (in our ordinary soft ground corn,) by the partial drying of the grain. But after that state has arrived, the heart and interior of the grain are still very soft, and often milky. The leaves also, (unless "fired" or prematurely faded by drought,) are still green, and would so remain, and afford more nourishment to the plant for some days, if not weeks, after the usual time of removing them all—which operation kills the plant immediately.

The diminution of the product of grain caused by taking off the green leaves, though so little regarded in general, has long been a subject of discussion, and in some degree also of experiment. Statements of experiments, and arguments founded thereon, were presented in various articles in vols. 2 and 3 of the Farmers' Register. All of these writers and experimenters (with but a single exception, of a very loose observer who scarcely deserved being there quoted,) agreed in the general result of there being very great loss so incurred. Among such conclusions, derived from experiments satisfactory at least to the several conductors, Mr. Clark, of Massachusetts, found the loss of grain equal to about 20 per cent. (F. R. vol. ii, p. 243, 5.) Mr. Andrew Nicol, of Virginia, supposed the same amount of loss, (p. 485.) Mr. Charles Woodson, of Virginia, found that the shelled corn of a row left without having any fodder taken off, weighed, when dry, rather more than both the corn and the fodder of a row on one side, from which the lower leaves only were stripped—and rather less than the corn and all the blades of another adjacent row, from which both lower blades were stripped and the tops cut, as usual—the blades on the tops being afterwards separated for the weighing, (p. 609.) Mr. Lorain, of Pennsylvania, found the comparative quantities of ears of corn from three adjacent rows as follows:

Row not stripped or topped,	bushels, 9⅝
Another, topped on Aug. 20th, and stripped after Sept. 18th,	7⅜
Another, topped on Sept. 2d, and stripped after Sept. 18th,	7¼

(Lorain's Husbandry—and F. R. vol. iii, p. 369.)

Mr. W. S. Fontaine, of Virginia, from an experiment stated very minutely, arrived at the conclusion that by pulling the fodder and cutting the tops, as usually done, he reduced the product of grain per acre nearly 6 bushels, (from 26 to about 20,) while the dried fodder (omitting the stalk of the top) weighed 386 lbs. to the acre; which, at the then usual prices, was losing $3.50 worth of grain, and saving, instead, at much greater labor, $1.63 worth of fodder, (F. R. v. iii, p. 549.)

Mr. Wm. Carmichael, of Maryland, found the proportion of shelled corn produced on a row from which the fodder (blades and tops,) had been removed, and another left with the fodder, as 41 of the former to 46 of the latter. In this case, the corn was much drier than usual when the fodder was taken off, and therefore less loss caused, (F. R. v. iii, p. 661.)

But high as are these authorities, and carefully as the experiments were made, it must be admitted that all the experiments had some defect, either in the manner of conducting them, or of observing or noting the results. The subject is a very difficult one for making perfectly accurate experiments.—Still, allowing for all apparent imperfection and sources of uncertainty, it can scarcely be supposed that all these observers were much mistaken in the general results.* After all, the question is only as to the degree of loss sustained. For there can be no shadow of doubt of the general proposition, that so long as the leaves of corn are still helping to feed the grain, (and which is as long as they remain quite green) that their being removed must detract from what would otherwise be the full supply of nutriment, and consequently from the full quantity or weight of grain. As soon as the lower leaves are pulled, and the top cut off, the plant, before green, dies forthwith. How much more it would have gained in grain by living and being nourished the natural time of its life, is the matter in question, and which is not yet ascertained.

Upon such grounds as have been stated, I infer that the gathering of fodder, in the usual mode, is of little profit, even if it did not lessen the product of grain; and even if of great profit, in reference to the labor alone, it would still be a cause of loss, in the damage to the grain.

Still, in relinquishing this long established bad practice, substitutes must be provided, sufficient for the supply of the large required consumption of long forage on the farm. Where clover husbandry is successfully pursued, or good meadows are mowed for hay, much of this want can be well and cheaply supplied. But in lower Virginia, the time for making clover hay (in June) is so much required also for other important labors, that we cannot spare enough time and labor for a large hay harvest. The fodder crop may still supply all deficiencies, (but in a different mode of harvesting from what is usual,) and which is safe from any damage to the grain, cheap in reference to labor and risk of bad weather, and profitable in all respects. This method is that of cutting off the stalks, at the time when the leaves have just ceased to supply nourishment to the grain, and curing the stalks, with all their remaining leaves, in shocks.

This plan has long been generally in use in Kentucky and other Western and also the Northern States. But it has been but little practiced in Eastern Virginia. Many years ago I attempted repeat-

* Since writing the above references, I have found an additional statement of an experiment, which was made on a large scale, and which seems to have been free from any defect or objection to the procedure. The conductor and reporter of the experiment is Dr. Thomas Massie, of Nelson, Virginia. He found that 8 rows of corn, extending through a field, left without removing the fodder, produced 17½ barrels of measured ears. Along-side of this strip, 8 other rows, (4 on each side,) stripped and topped, as usual, made 16 barrels. The difference of the products was very nearly 12 per cent. (Farmers' Register, vol. vi, p. 110.)

edly thus to save fodder, and generally failed. The cause of failure was cutting down the corn too early. My present course, which has been pursued for seven years, and with the whole crop of corn for five years, will be now stated.

As the ordinary mode of taking off all the leaves kills the corn plant immediately, of course the stalk might be cut off at the same time, with no more injury to the filling of the grain. But would be injurious in both processes. Therefore, the cutting down should be delayed until the leaves generally have ceased, or are about ceasing, to supply nourishment to the plant. This safe time may be known by the first appearing of either of two indications. One is, when all, or nearly all, of the leaves below the ear have lost, or are fast losing their green color, and are mostly yellow, or dry. Or even if the lower leaves remain mostly green, it is safe to cut down the stalks, if the shuck which encloses the ear is beginning to turn yellowish, which is a safe indication of ripeness. Of course there will always be intermixed some few less mature stalks, either produced from later planted seeds, or retarded in growth by some other causes. If there are but very few of such greener plants, they will not be worth omitting, though losing something by being cut off too soon. But if numerous, they may be left for a later cutting, and then be set up around the shocks before made.

The kind of corn which I now cultivate is that known by the name of "prolific" or "Maryland twin corn." It is smaller in stalk and ear, and has harder and heavier grain, than the large and soft corn usually raised in this region, and is some 10 days earlier. The times of beginning and finishing the cutting down of my crop have been noted since this practice was begun, except in two seasons, when I was away from home, and were as follows:

Began to cut and shock.	Finished cutting down.
1844—Aug. 26th, (fodder of ripest corn pulled still earlier,)	Sept. 10th.
1845—Sept. 4th,	Sept. 19th.
1846—Aug. 17th,	Sept. 7th.
1847—Aug. 31st—partially and regularly on Sept. 9th, (earliest fodder pulled before Aug. 31,)	Sept. 23d.
1848—(not noted,)	Sept. 13th.
1849—Sept. 6th, (later than proper,)	Sept. 27th.
1850—Aug. 31st.	

Having determined upon the number of rows of stalks to allow to each row of shocks, (say about 30,) at such distances a careful laborer proceeds to mark the places, and make the supports for the shocks. For this purpose, at each place designed for a shock, he draws together the stalks of 3 or 4 nearest adjacent "hills" or stations, standing in two rows, and ties them closely together (the tops crossing,) at the height of the interlocked ears. To prevent the stalks breaking, a hoe is first struck into the ground just on the outer side of these stalks, which, parting the outside roots, permits the stalks to be made to lean inward, without being bent or broken. When thus locked at the ears, and tied together, these stalks offer a sufficiently strong support to keep the shock from falling. The rapid-growing trumpet-flower vine, which is a common weed in most of our fields, offers convenient strings for tying the supports. The corn-rows are either 5 or 5½ feet apart, and the stations in the rows usually 3½ feet, with 2 stalks at each, or 3 on the richest ground.

As soon as the tying of the supports is far enough ahead, other men begin, and proceed regularly to cut down all the other stalks. Each man cuts two corn rows at once. The implement used is a heavy and sharp knife, made of a piece of old scythe, about 15 inches long, with a part of the thick back stuck into a wooden handle. The cutter grasps the 2 or 3 stalks standing together with his left hand, and with his right chops them off, (usually at one blow,) about 12 inches below the lowest ears, or the position of the ears, as they may hang downward. The stalks, so cut off, are thrown into and across the next adjacent interval, or "balk," outside of the laborer's two rows. The next man lays his stalks on the same places; so that the stalks of 4 corn-rows are thrown together, and lying straight and even with each other. Other hands follow close after, and pick up these stalks, and carry them to be placed, as nearly upright as they will stand, and opposite, around the ears of the supporting stalks. Each of the first armfuls of stalks, as brought by the bearers, is placed in one of the angles of the supports, and the next one is opposed, and so placing the next supplies regularly around, until the shock is large enough. Care should be taken to have the shock built nearly of equal thickness around the support. The shock will then be nearly self-supported, by equal inward pressure. When finished and settled, the shock approaches somewhat to a conical shape, more or less flat on the top—the circular base being 8 to 9 feet in diameter.

Thus the corn-stubble is left standing from 15 to 36 inches high, according to the growth. The leaves left on this lower part of the stalks are not much loss, as provender, being mostly dried. It is a great gain to get rid of the weight of so much stubble, (then heavy with sap,) in the carrying to the shocks; and afterwards in the carting so much additional bulk and weight to the barn-yard. The stubble is of no value except as manure; and it does not the less serve as manure, if left on the ground on which it grew, than if moved to another field. If the corn-field is to be sown in wheat, it is best, as a second operation, to cut off the corn-stubble close to the ground, with a sharp hoe. This is done rapidly. The cut stubble is not much in the way of ploughing and harrowing. I have ploughed under such stubble, for sowing wheat, without cutting them off; but cutting them is the better way.

At the time prescribed for cutting down the corn, the leaves are indeed much passed their prime condition of value as fodder. In addition, all the leaves on the high stubble are lost, as provender. Of course, the remainder, put into shocks, is not equal in quantity, nor in quality, with the corn fodder saved as usual. Further—the outsides of all the shocks are spoiled as provender, and merely serve to shelter the inside from sun and rain. Still, there are advantages fully compensating these losses of value in the long provender, besides the most important benefits of saving more than half the labor, and avoiding the usual and great damage to the grain. In the first place—whatever remains green of the leaves, and also the shucks and stalks, are immediately placed in the shock, and cured in the shade. This must retain for the leaves and shucks as provender, and perhaps also for the stalks as manure, more of their strength, than when exposed as in the usual mode. In this, corn fodder is exposed in small bundles, for 48 hours, to the sun and dews, before being shocked—and also to all the rain that may fall within that time. As to the shucks, they are exposed singly, and gaping, on the stalks, to all

kinds of weather, for weeks, or for months, after being killed. There can be no question of the superiority of the shade-curing of all kinds of green provender.

Secondly—as the stalks when cut down are immediately shocked, and as the shocks are almost impenetrable by rain, the fodder is all (except the outsides of the shocks,) secured at once from all danger of bad weather. In the long continued ordinary fodder-pulling, all the rain that may fall must be received on some portion of the exposed fodder; and the risk of loss from rain is nearly of as much account as the whole labor in good weather.

A new beignner of the mode recommended is apt to err from being over-cautious in one respect, and to make his shocks too small, and too open, so that they admit driving rains, and are much more apt to fall, than if built larger, and the stalks set more closely at bottom. According to my experience, the fodder is better preserved in moderately large shocks than in small, and there is no more danger for the grain. But whether larger or smaller, the shocks very rarely admit rain, so as to show any injury therefrom. In Kentucky, spaces of 16 corn-hills square, (256 stations or clusters,) are allowed for each shock. Corn being planted at 4 feet by 4, the usual distance there, and 3 stalks to the hill, would make 10⅔ shocks to the acre, and an average of 768 stalks to the shock. My shocks are not of such regular sizes, nor usually so large. This season, I counted 181 shocks on a quadrangular part of my field, of not quite 10 acres, yielding about 30 to 35 bushels to the acre. These shocks were made on the third day from the beginning of cutting down the corn, and of course when it was at nearly or quite the greenest state of any. These shocks have kept both fodder and corn in as good condition as need be. The only exceptions are, that in the middles of some of the larger shocks the fodder on some few stalks is mouldy; and in the largest (and too large) shocks, and in very rare cases, some ears also had moulded early, though they had not rotted, and had become quite dry before being put in the cart. Probably these mouldy ears, if not all the stalks having mouldy fodder, were too green when cut down. For latterly, I have had none of the greenest left for later securing. When a few scattering late plants are left standing, they are very liable to be blown down, and to be hidden in the weeds, or pea-vines, and so rot or be lost. To avoid such loss, and also the trouble of a separate gathering from the few late stalks, I prefer to cut them down with the riper bulk of the crop. But of course, when such green stalks are cut down, the soft grain must shrink, though not more so than if the fodder had all been taken off, and the stalk left standing. And this is done in the usual operation of pulling fodder, as it is impossible to make ignorant and careless hands omit stripping or cutting the tops of the too green plants. Further—the too green corn, when cut down and put in the middle of a shock, even though the grain may not show perceptible loss by shrinking, will be apt to be touched with mouldiness, just as the ears are when gathered much later (though still not dry enough for housing,) and shocked and put away in the barn. In any mode of securing, many ears are always found mouldy, and many rotten. All such cases, taken together, are believed to be not only as few, but fewer, in my mode of shocking corn, than in any other more usual mode of taking care of the crop. For if, after taking off the fodder, blades and tops, the corn stalks are cut down and shocked, as usual, to sow wheat, these flat-topped shocks do not exclude rain. The ears of corn are not only exposed to rain, but are so closely compacted together, that they dry with difficulty. And when made large, as required for convenience, I have known serious damage to the ears, early in the shocking, by the corn moulding; and in other cases, still greater late damage from rotting, in a very rainy season, and with consequent late gathering. And if wheat is not to succeed the corn, and so the corn is left standing singly on the stalks, until pulled off for carting in and housing, there is a different kind, but as great risk of loss by rotting ears; for many small ears are broken off in the labors of taking off and removing the fodder, and which being mostly left on the ground, rot of course. Many other stalks fall, or are blown down, and their ears, touching the earth, are more or less damaged. Rain enters many of the gaping shucks, and injures the exposed grain. And lastly, when pulling off the ears from the standing (or fallen) stalks, some are left by oversight or carelessness; and more, after being pulled off, are overlooked and left scattered about in the then tall grass or after-growth. So that the losses of grain which attend my plan, even if peculiar to it, are certainly not greater, and probably are much less, than those incident to the different usual procedures.

There was one year only, in the seven which I have followed this method either principally or exclusively, in which much risk was incurred, and much damage suffered by the fodder. But even this exception was brought on (unnecessarily) by my too great confidence induced by previous uniform success, and the failing to use the means for safety here directed as necessary. The causes of loss, and the manner, will be stated particularly. In 1846, nearly the whole growing season for corn was remarkably rainy, and the crop was luxuriant, and the green state of the plant continued late. The cutting down and shocking was begun on Aug. 17th, on which day several hasty showers fell. The two next days (18th and 19th) were also more or less rainy. The cutting down and shocking proceeded, without regarding wetness from rains or dews, except in the times when rain was falling too fast for out-door work. Moreover, from want of care, much corn was included in the cutting down that was too green.—Rains again occurred, in showers varying from heavy to light, on the 22d, 23d and 24th of August—on the last of which three only was the cutting of corn removed. On the 25th, steady rain fell all the day; and from the 25th to 30th inclusive, every day was rainy more or less, and all the intervals, to the 30th, cloudy, foggy, or misty. Having found that damage had occurred, on the 31st, the first day of clear and drying weather, I began to search for and open the damaged shocks. Nearly all which had been put up wet, and in the first days were found (as then noted in my farm journal) "damp, the interior having a funky smell, and spots of the stalks, blades and shucks mouldy. Not much corn affected—but deemed in danger, if the weather should not continue clear and drying. The wetness mostly on the west side, into which the heaviest rain had been driven by strong wind." After opening shocks and immediately rebuilding them, of smaller size, for some hours, it was deemed unnecessary to continue the operation regularly or generally, and only some of the largest, or those known to have been put up wet, were afterwards opened. All the remaining, and much the greater number of shocks, dried as they

stood, and the moulding proceeded no further. Even most of the opening that was done might have been dispensed with, as the fine weather would have soon dried the shocks. Still the fodder of all the shocks, put up before this wet spell, was considerably injured, though not more so than would have occurred to pulled fodder, in the same uncommon wet weather. To that time, I had cut off the whole length of stalks, and the stalks were set more out around the supports, more open, and of course the bases of the shocks were broader and the sides more sloping, than in my later practice. The then different construction served to admit driving rain more freely.

For the remainder of the season of 1846, and in the four years since, I have aimed to profit by the lesson of danger then learned, and to avoid the worst errors then committed; and no subsequent damage, or loss, worth consideration, or greater than would have been suffered in any other procedure, has since occurred. The stalks are cut higher, and made to stand more upright, and the shocks stand much better. Smaller shocks also contain many more stalks, when cut high than low. The cutting of stalks is not permitted when they are wet with rain, or with heavy dew; or if cut, or lying wet, the middle of shocks (say 150 to 200 stalks) only are put up, and stand to dry, before more stalks are added to complete the shocks. Care should also be used (and has not always been, in my operations,) not to cut down corn before the time above prescribed, and the green stalks necessarily included in the general cutting, not to be placed in the middle of the shock. The base of the shock ought not to be more than 9 feet in diameter. With these requisites observed, this operation will be found as safe as any other subject to the influence of the weather.

The only serious difficulty that I have found, is not in respect to the safe preservation of either the corn or the fodder so long as remaining in the shocks, but of the fodder after gathering the corn. Before this year I have stacked the stalks (after pulling off or shucking out the ears,) in long and tall ricks. But the[y] cannot well be secured from the entrance of rain, [m]uch of the fodder has always been thus subse[q]uently damaged or rotted. This season, I am putting [u]p the stalks, with all their fodder and shucks, in round or conical stacks, of large size, built around a central pole, as is done usually with blade and often with top-fodder. As my stalks are not generally more than 18 inches longer than tops cut above the ears, there is no apparent reason why they should not be kept as well in stacks of this kind. So far as there is house-room for the stalk-fodder, of course there is no difficulty in its preservation.

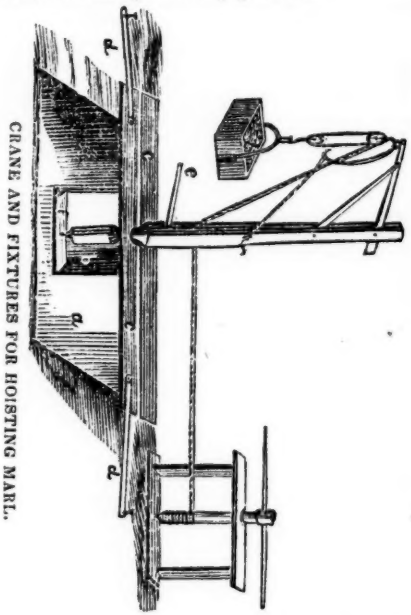
In the cutting down corn to save the fodder, there are two incidental advantages. One is, if wheat is to follow the corn, as is usual, that the operation for saving the fodder also cleans the land of the corn—which is of itself a considerable labor, required merely for the sowing of wheat, when the fodder has been saved separately and in advance, as in the ordinary procedure. The ground is also cleared much sooner, on the former plan. This would allow, if the teams are not otherwise more profitably engaged, the land to be ploughed, (except the narrow strips occupied by the shocks,) 4 to 6 weeks before seeding time—which earlier ploughing would serve not only to lighten and advance the labor, but greatly improve the preparation for and the product of the wheat.

Another advantage, whether wheat is to follow or not, attends the plan recommended, when the native pea is planted or sown among the corn, as a secondary crop, whether for gathering, or for a manuring crop. The removal of the shading corn crop gives all the land and the sunshine to the pea-crop, and greatly to the benefit of its growth. This is a very important benefit to this secondary crop, the culture of which has been rapidly extended of late in lower Virginia.

CRANE AND FIXTURES FOR HOISTING MARL.

To the Editor of the American Farmer—

Agreeable to request, I now give you a cut of my Crane and fixtures for hoisting marl, which draft, although not as perfect as I could have wished, will nevertheless give a very good idea.



CRANE AND FIXTURES FOR HOISTING MARL.

a. the pit, b. a recess in the side of the pit, 6 feet deep from the surface of the ground, and 2 feet recess to allow ample space for the working of the crane—c. c. two hewn logs 10 inches square, and which should extend beyond the pit at each end, and to be well secured by posts and stobs—a space of 3 inches may be left between them to drop the beam e. in while hoisting, and the logs further secured by spiking 2 inch plank across at the crane, and bracing at d. d,—f. is a hewn log sunk in the marl, and run well in each side of the recess, and an ink is placed or let in the centre for the gudgeon. The capstan should be made to work very easy, and kept well greased, in which case the empty box will run the chain off with great rapidity—the arms, 7 feet in length, should be spiked in to prevent flying out.

My shears are of iron, 8½ inches in diameter, and 1½ inch thick, and the blocks lined on the inner edges with iron; and having now given rope and chain both a fair trial, I have no hesitation in saying, that the use of the former is money thrown away, as it will neither stand wet nor

cold, and becomes so stiff in freezing weather, that it soon gives way and is very difficult to work, while the chain is at all times much easier, and always the same. The boxes are made of 1¼ inch plank, 14 inches wide, and are 3 feet 2 inches long at top, (inside measure) 2 feet 10 inches long at bottom, and 2 feet 3 wide; are bound all around the edges with heavy hoop iron, and hold six heaping bushels marl (a cart load)—instead of a pin, (which I found very troublesome,) to prevent the boxes turning, I have a heavy loose slide to work on the bale, with jaws, which latter catch on the strop of thick iron with which the centre of the box is bound, and which strop extends on that side to the top of the box, and is for the purpose of strengthening the box and hinging the bale to—The utility of this crane and fixture over the double, is, when the box is lowering, the hand in the pit may direct it to any part that may be required, and thus enabled to work a large surface, while the double can only be worked from one point, as the box that is up will prevent the lower box from being led off to any other than a perpendicular. Two hands are sufficient at the capstan, and work it with ease, but when three carts were hauling, the three hands made it lighter, and could hoist and haul as much per day as I would consent for my horses to do, and fully as much as when the cart can be backed up to the pit and the grubbing hoe has to be used by each carter, and load it himself. I use two boxes to prevent detention, and care should be taken in hoisting, when the box is aslant from the hoisting point, to throw back the slide on the round part of the bale, and let the box slide on the bottom of the pit to the perpendicular point, when the slide may be again dropped, without detention.

The hook is iron 2 inches by ½ inch—4 feet 9 long from the point across to the eye, and should be bent to clear the blocks—Between the capstan and crane is a small trough, made of 2 inch plank, open at each end, and sunk level with the earth, to throw the chain in while the crane is turning, so as to let the carts pass over without injury to the chain.

In the commencement, instead of a capstan, I had staples put in the back of the axles of each cart, intending that each horse should draw up his own load, and which I found could be done, but I found also that it was necessary as the horse progresssed, to have a catch or somethiug to hold on, and being deficient in this, and finding it rather straining to the horses, I substituted the capstan, which gets it up as fast as necessary.

While on the subject of marl, having an inexhaustable quantity immediately on the line of our Rail Road, and of superior quality, surpassing light agricultural lime, bushel for bushel, according to Mr. Ruffin's opinion, as expressed in his essays on marl, if I could induce those in the interior to marl their lands, and could prevail on the Road Co. to adopt the freight table of the northern Rail Roads with regard to mineral and other manures, I would on my part offer great inducements to improve their lands. "MAGNOLIA."

SUFFOLK, Va. March 11, 1851.

BROOM CORN.—Want of room prevents us from answering our Yorktown, Va. correspondent in full this month; we will attend to his questions more in detail hereafter.

The proper *soil* for this crop, is the same as for *Indian corn*. Distance apart: rows 3 feet apart; plants in the hill: 18 inches apart. The soil must be good, as well as manured,—a shovel full of compost should be given to each hill at the time of planting. *Seeds to the hill:* from 20 to 40 seeds must be deposited in each hill—the *plants* must be thinned out at the first working, from 8 to 10 of the most healthy to be left standing in each hill. If the soil is rich, manure may alone be applied in the hill; besides which, 8 or 10 bushels of ashes should be broadcasted at the time of planting. The *period of planting*, is any time after the frost is out of the ground, till the beginning of May, the earlier the bettter. *Preparation of the ground* same as for Indian corn; thorough ploughing and harrowing. The *price* of straw ranges from $4 to $7 per hundred pounds—*Product of straw* from 400 to 1000 pounds per acre, as per quality of soil, care of culture, &c.—*Product of seed*, from 20 to 100 bushels—*price of seed*, from 20 to 25 cts. per bushel—*Use*,—when ground, or chopt, good food for every description of stock—unground, excellent food for fowls. *Cultivation*,—work it with the cultivator and hoe, keep the ground clean, and open. There is a machine, called a *scraper*, for cleaning off the seed; a *curry-comb* is sometimes used for the purpose. Demand steady and increasing.

Correction.—In the communication from "W. B. B." in the April No. page 354, at the beginning of the 3d paragraph, read "I began to *pasture*, last spring," instead of "*plaster*."

REVIEW OF THE TOBACCO & GRAIN MARKETS.

Reported for the American Farmer by J. W. & E. Reynolds.

Notwithstanding assurances of the shortness of the crops of Tobacco raised in the United States last year, dealers are timid in purchasing, and during this month have bought small amounts at a reduction of $1 per 100 lbs. on common and middling qualities. In the prices of better descriptions, we think there is very little change.

Much will depend on the prospect of a large crop being raised this year—should it prove favorable, prices are likely to continue as they now are, but should the prospect be otherwise, prices cannot fail to go up considerably. We quote sales for *very* common and frosted, $4 to $4¼, common sound $5 to $5½, middling, $6 to $6½, good brown and red, $7 to $7½, and fine red or yellow, $8 to $9; extra fine, $10 to $12—Corn, yellow, 63 and 64—white, 60 to 62—Wheat, 90 to $1.05—Oats, 41 to 43 c.

Prices for Field Seeds at which they are furnished to farmers, say quantities for their private use—*by R. Sinclair, Jr. & Co.*

Red Clover, (*scarce,*) $6 a 6 50 per bushel; White do. 28c per lb.; Lucerne, 28c per lb.; Sweet scented Vernal Grass, $6 per bush.; Spring Vetches, $3.50 do.: Orchard Grass, (*scarce,*) $2.25 do.; Herds or Red-top Grass, 85c do.; Timothy Seed, $3 a 3.50 do.; Ky. Blue Grass, $2 50 do.; Tall Meadow Oat do. $2 do.; Eng. Ray Grass, $3 50 do.; Millet, $1.75 do.; Buckwheat, 88c do.

Guano.—There have been several arrivals during the month, one of which was sent to the District of Columbia, the others have been stored by the agent for fall sales—the supply for spring use was ample, and some left over in the hands of dealers—If the wheat crop turns out as well as present circumstances seem to indicate, the demand in the fall will be very great—and it is not likely that prices will be lower than they have been ranging all this season—We quote Peruvian, less than 10 tons, $48

per ton of 2000 lbs.—in quantities of 10 tons or more, $47; do. 20 tons and upwards, $46—50 tons and upwards, $50 per ton of 2240 lbs.—Patagonian, $10 per ton less than Peruvian.

Wool—by Jas. Baynes.—Wool, for some short time past has been declining in price, in consequence of the approaching crop, which is expected to be pretty large—I think however, it will start when the new crop comes in, at about 3 to 4 cts. higher than last year.—The manufacturers say that goods are not much higher than they were this time last season, and unless goods should advance, wool must fall to last year's prices—which were, at the opening, as follows: For ¾ full blood, 33 to 37½c—½ to ¾ do. 30 to 33—¼ and com. 26 to 29—unw'd 16 to 17.

Cotton.—146 bales good ord. to fair upland, 10⅜ a 12½ c., 6 mos., and 134 bales Apalachicola, good ord. to mid. fair, 10⅞ a 12¾. 6 mos.—Since last steamer's news, there is a decline of ⅛ a ¼ c.

Flour.—Howard st. dull at $4.50—city mills. $4.62—Susqu. $4 62—corn meal, Balt. bbls. $3.12.

Beans, scarce and in demand, at $1 50 a $1.75—Peas, 75 a 81½ c. per bushel—Hay, loose, $15 a $16 per ton, bale do., $17 a 18—Molasses, N. O., 33 c.; Cuba, 21 a 22;—Porto Rico, 25 a 31.—Pork, firm, with a tendency to advance—Rice, $3.35 a $3.37 per 100 lbs.—Sugars have advanced fully 12½ cts

Cattle—550 head offered—sales at $3 to $4¼ on the hoof, equal to $6 a 8¼ net, averaging $3¾ gross—showing a slight decline, in consequence of a rather large supply for the season.

THE MORGAN BLACK HAWK,

THE property of CHARLES CARROLL of Doughoregan Manor, Howard District, Md., near Ellicott's Mills, was bred by the Messrs. Hills, Bridport, Vermont, and was got by the celebrated Horse Hill's Black Hawk.

The Hill Black Hawk was sired by the Sherman Morgan Horse, owned by Mr. Bellows, of Vermont; Sherman Morgan by old Justin Morgan; old Justin Morgan by true Brittain, or beautiful bay, which was taken from Gen. Delancy during the Revolutionary War, and run across King's Bridge. Hill's Black Hawk's dam was a three-quarter blooded English Mare, weighed 1025 lbs. could trot a mile in less than 3 minutes, and was in every respect a most perfect animal. For more minute particulars, see Cultivator, June, 1845, page 196.

The MORGAN BLACK HAWK'S Dam Peggy, is of a dapple brown color, of good size, and has often trotted a mile in less than 3 minutes. She was by the Woodbury or Burbank Morgan, he by old Justin Morgan; Peggy's dam was a Jet Black Morgan Mare, of good size, a very fast trotter. The dam of Bulrush or the Justin Morgan was a thorough bred mare, called Crazy Empress; she by American Eclipse, out of a thoro'bred mare.

By the above PEDIGREES, which are perfectly authenticated, it will be seen that the Morgan Black Hawk has seven or eight crosses of the celebrated Morgan stock, and is confidently believed to be the purest Morgan horse now living, and certainly combines all the high qualities of that stock, being a horse of great beauty, fine carriage, and great speed.

He stands at Doughoregan Manor, five miles from Ellicott's Mills, on the Frederick Road.

☞ TERMS—$35, pre-paid, without insurance, this includes all care and feed of the mare, until 3 refusals of the horse.

☞ As he is limited in the number of mares, an early application is desirable. may1

EMERY & CO'S.

New York State Agricultural Society's First Premium

RAILROAD HORSE POWER,

AND

Overshot Thresher and Separator.

THE attention of the farming public is solicited to the newly improved Rail Road Horse Power, as now made by the subscribers. Also to their Over-Shot Spike Cylinder Threshers, with Vibrating and Revolving Separators.

Having had much experience in the sale and manufacture of Horse Powers and other Agricultural Implements; and being acquainted very extensively with the wants of the farmeres in this country, as well as the character of most of the implements and machines now in use, we think we hazard nothing in pronouncing our latest improved Power far superior to any before made or sold by us, or with which we are acquainted.

At the late Fair of the New York State Agricultural Society, held at Albany, their committee on Horse Powers, unanimously awarded to us the highest premium for the best Rail Road Horse Power, among the large number of the most popular and approved kinds of the day, which were on exhibition and in competition,—it being considered the most efficient and durable on the ground.

As the principal mechanical parts of its construction differ so materially from those mostly sold by us previously to the past season, as well as from all others now in use, we have thought it an object to farmers, as well as for our own interest, to illustrate them by cuts and descriptions, as shown in the Farmer for last month, [April.] The advantages of the recently adopted improvement are numerous and plain to be seen, one of which is removing all the gearing and wearing parts to the outside of the power, where it is free from dust and dirt, &c., and where it may be boxed up, requiring little time or oil to keep them in the best possible running order.

The liability of breakage and wear, and slipping of links and pinions, as in the rack and pinion powers, (and most others) is wholly removed. In shipping them, the gears are taken off and packed in a box with other things.

Having sold a large number of the IMPROVED

Machines the past harvest, all of which, having given entire satisfaction, and when used side by side with the most approved of other kinds, having been preferred, we do not hesitate to recommend and warrant them equal, if not superior, to any before made or sold by us, or of which we have any knowledge.

Our Thresher consists of a small spiked cylinder, about fifteen inches in diameter, and twenty-six inches long, with a substantial spiked concave above this cylinder, which is adjustable to the work to be done. The feeding table being level, allows the feeder to stand erect, and is little annoyed with dust and dirt—and no possibility of hard substances getting into the Thresher, to its injury.

We attach a vibrating or revolving separator to them, which serves to separate all the grain from the straw, and leave it with the fine chaff for fanning mill, while the straw is carried off for stacking.

Having been obliged to have a large portion of some parts of our work done by contract, we have felt the inconvenience and want of dependence to be placed on the quality of materials and workmanship, we have now so extended our facilities, as to enable us to make all parts of our own machines, and can now assure the public that none but the best work and stock will be offered by us.

The Two Horse Power Thresher and Separator is capable, with three or four men, of threshing from 150 to 200 bushels of wheat or rye, and the single one from 60 to 100 bushels, or double that quantity per day.

Price for Emery & Co.'s one Horse Power,	$85 00	
do do Thresher and Separator,	35 00	
do Bands, wrench, oiler and extra pieces,	5 00	—$125 00
do Two Horse Power,	110 00	
do do Thresher and Separator,	35 00	
do Bands, oiler, wrench, &c.,	5 00	—$150 00
Price of Emery's Thresher, and Cleaner, with bands, wrenches, &c.,		$75 00
do Saw Mill, complete for use,		$35 00
Price of Grant's Fan Mills, adapted for hand or Power, from		$22 to $28 00

Also Wheeler's Rack and Pinion Power, manufactured by ourselves, and warranted equal to any of this kind in use, [or made and sold by any other manufacturer,] which we sell with a full guarantee of the right of using same, in any territory of the United States, for the following prices:

One Horse Power,	$75
Two Horse Power,	100

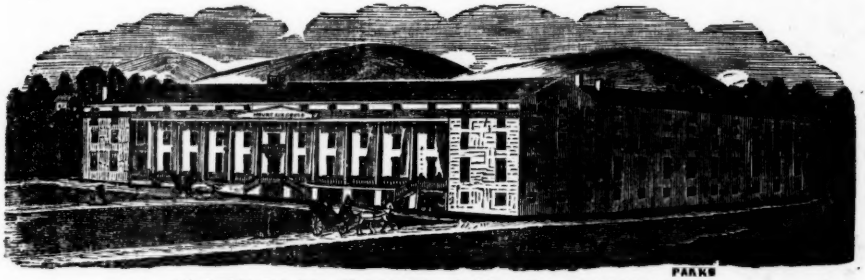
All the above are subject to the warranty of three months use and trial, and if not satisfactory may be returned and full purchase money refunded.

For further particulars see illustrated Catalogue, furnished gratis on application to

EMERY & CO.

Original and sole Proprietors of the Albany Agricultural Works, Warehouse and Seed Store, No. 369, 371, Broadway, Albany, N. Y. may1

CAPON SPRINGS.



MOUNTAIN HOUSE, CAPON SPRINGS.

THE proprietors of the "Mountain House" at this popular "Watering Place," have now completed their improvements on an extended scale: the furniture is entirely new, and the rooms spacious and well ventilated. The Bath establishment recently erected, is the property of the State of Virginia.—It is about 300 feet long, has all the modern improvements, with cold, warm, shower and plunge baths; a dressing room is attached to each bath, and it is altogether a magnificent building of its class, not equalled in this country—nor is it surpassed in Europe.

The recent costly and extensive improvements, the well known medicinal properties of its waters, and the delightful atmosphere of its mountains, combine to render Capon Springs one of the most pleasant, as well as the most healthful, summer retreats in the Union. The citizen of the South will here find, what has been long wanted, a *Southern* watering place of the *first class*, convenient of access, where he can spend his summer months, free from the *unpleasant annoyances so frequently experienced of late years*, at similar places in the North.

The appointments of the house will be under the superintendance of competent persons in all the departments.

There is an abundant supply of Ice secured for the season. A superior Band of Music is engaged, and will be in attendance. Billiard and Bowling Saloons are now completed; also Shooting Gallery and Archery.

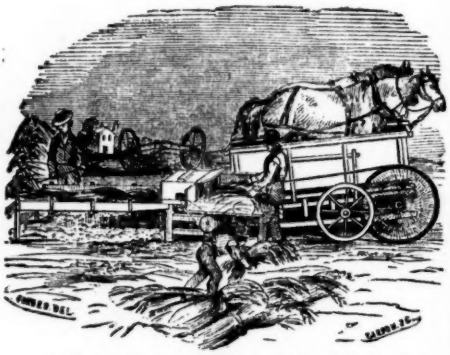
ROUTE—Visiters leaving in the morning train of Baltimore and Ohio R. R. Cars, dine at Winchester and arrive at the Springs for tea.

☞ An arrangement has been effected with the different lines, by which the citizens of Baltimore and Southern Virginia, can procure "*through tickets*" to Capon Springs, from Baltimore, Richmond, Norfolk, Fredericksburg, and the District cities, at prices much reduced on former rates. The exact prices from each point will be made known through the newspapers in due season.

The house will open on the 15th of June next.

THE PROPRIETORS.

Capon Springs, Hampshire Co. Virginia. may1-3t



New York State Agricultural Works.

AGRICULTURAL MACHINES AND IMPLEMENTS.

WHEELER, MELICK & CO.

CONTINUE their manufactory at the corner of HAMILTON and LIBERTY STREETS, ALBANY, where they are prepared to fill all orders with despatch. Orders for

Wheeler's Patent Railway Chain Horse Powers, and OVERSHOT THRESHERS and SEPARATORS, will receive their prompt attention.

☞ The large and increasing demand for these Machines has induced the Proprietors to erect a New and Spacious Manufactory, and otherwise extend their means of promptly filling orders. Their Powers and Threshers have been sold in nearly every State in the Union, during the past year, and their superiority has been acknowledged by numerons testimonials, not only from Agricultural Societies, but from persons who have used them. They have been awarded the first Premiums at all the principal Fairs, where they have been exhibited in operation, including the Pennsylvania State Fair, the Provincial Fair of Upper Canada, and the Michigan and Ohio State Fairs, together with numerous County Exhibitions in the different States.

THE TWO HORSE MACHINE, with three to five hands, will thresh from 125 to 200 bushels of Wheat per day, or twice that quantity of Oats.

The One Horse Machine will thresh rather more than that quantity.

PRICE AT ALBANY.

For Two Horse Machines,	- - -	$145 00
For one Horse do,	- - - -	$120 00

Machines will be shipped to any part of the United States or the Canadas.

The subscribers are now shipping Powers and Threshers to their agents on the Mississippi and Ohio rivers, and the interior of the States bordering on those rivers, and to all the principal ports on the Lakes, as well as their numerous agents in the interior of the Lake States. They will be delivered at all our agencies with only the cost of transportation added to our home prices. Persons wanting to purchase, may by writing to us, learn where they can obtain our machines most conveniently.

N. B.—*Our* Machines are *warranted* as heretofore, *to work to the satisfaction of the purchaser,* or they may be returned within 60 days after they are received, and the purchase money (if paid) will be refunded.

We want a few more agents in most of the States. To competent men who can give satisfactory references, liberal commissions will be allowed.

WHEELER, MELICK & CO.
Corner of Hamilton and Liberty sts., Albany, N. Y.
(near the Steamboat Landing.)

☞ CAUTION.

The subscribers, Patentees of WHEELER'S PATENT HORSE POWERS, having noticed that an Agricultural Firm is advertising that Wheeler's Patent Horse Powers and Overshot Threshers are manufactured and sold by them, when in fact they have not obtained from us any liberty to use our Patent, we hereby caution all persons that said Firm has no right to use our Patent, or to manufacture or sell said Horse Powers, and that a sale by them will confer no right upon the Purchaser to use such Power.

Messrs. WHEELER, MELICK & CO. of Albany, and their Agents, are the only persons authorized to sell WHEELER'S PATENT HORSE POWERS; and every such Power made or sold by them, or by any person having a License to do so, has upon one of the Cast Iron Semi-Circles at each end of the Power, the words

"WHEELER'S PATENT—WHEELER, MELICK & Co., MAKERS, ALBANY, N. Y."

A due attention to this fact will enable Purchasers to avoid imposition or fraud.

No person or firm in Albany, except WHEELER, MELICK & Co., is authorized to make or sell said Horse Powers.

A. & W. C. WHEELER,
May 1. Patentees.

BONE DUST.

THE subscriber will furnish ground Bones, warranted free from every mixture, *or the entire quantity forfeited,* at 50 cents per bushel, until the 1st of July next.—Also a second quality article, composed in part of Bones, and in part of Flesh of Animals, being a quick and powerful fertilizer, at 35 cts. per bushel.—Col. W. W. W. Bowie, the well known "Patuxent Planter," who receives his supply of bones from my Factory, says that the "bone dust at 50 cts. per bushel, was the best I ever saw."

Orders may be left at the "American Farmer" office, directed to me, or at the Factory below the Race Course, Canton, near Baltimore, will meet prompt attention.

None of my manufactured Bone Dust is sold except at my Factory. JOSHUA HORNER.

My second quality is a new article of manure; I commenced making it from reading that portion of Dr. Higgins' report, in which he advises farmers not to buy made up or compound manures, but to make their own, viz: to procure the offal of the slaughter houses, &c. and boil the same and mix it with their barn-yard manure—The article I offer to the public is made from the flesh of animals boiled, mixed with plaster and charcoal, to preserve the ammonia—lime, soda, and ashes, are also used in small proportions, in the process of manufacture—it is put up in pie, under cover, for 6 to 9 months, the whole mass is then mixed with an equal quantity of ground bones—There is no grand secret in this preparation—it is a substantial, quick and powerful manure, combining the durability of bones with the immediate action of guano, and hardly second to the latter, for insuring an immediate return for the investment. J. H.

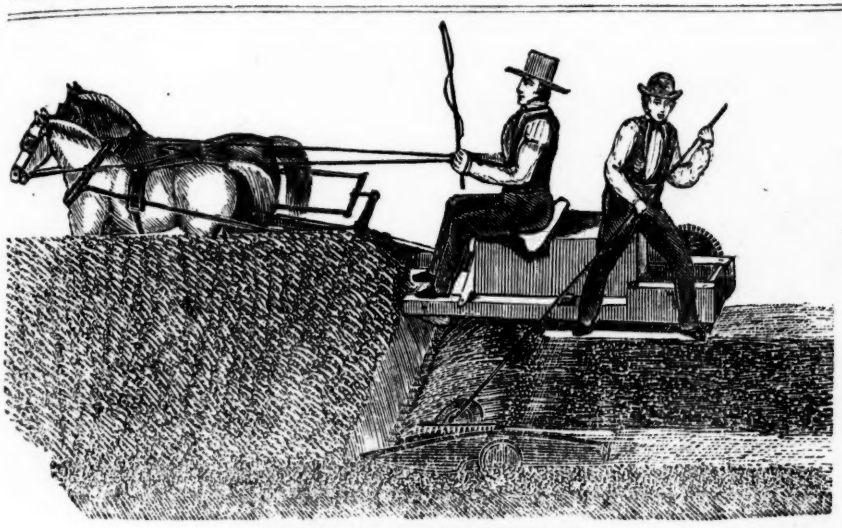
I furnish to my customers, when bags are not sent, 2 bushel bags, at 6 cents each. may1-3t*

GUANO! GUANO!!

300 TONS PERUVIAN GUANO, of the latest importations, a part of the Brooklyn's cargo, in good cotton bags. Also, Patagonian Guano, of good quality. For sale in lots to suit purchasers at the lowest market rates.

Clover, Timothy, Orchard and Herds Grass SEED, of superior quality, kept constantly on hand and for sale by

T. W. LEVERING & SON.
mar 1-3t No. 113 Pratt street wharf.



HUSSEY'S REAPERS.

THE subscriber deems it due to the farming public, that the following testimonials should be laid before them—the prospect of the wheat crop, at this time, renders it probable that much difficulty will be experienced in saving it, and he would particularly refer to the facts stated by some of the signers, (respectable Western farmers, most if not all of whom had used Reapers made by others) that *lodged Wheat* could not be harvested except by means of his Reaper—and that the delay and disappointment caused by other machines getting out of order, was not experienced by those who used his. The letters in the possession of the subscriber testifying in behalf of his Reaping Machine, and of its superiority over all others tried, in Maryland, Virginia, and the West, are too numerous for publication, but will be shown to those gentlemen wishing to obtain such a machine, on application to him in Baltimore.

OBED HUSSEY.

Blackberry, Kane county, Ill., Aug. 28, 1849.

This may certify that I have had one of Mr. Hussey's Mowing and Reaping Machines on my farm this year cutting Wheat, Oats, and Grass for a short time. I think nothing can beat it cutting Timothy Grass, and I intend to purchase one for that purpose. While the machine was cutting Prairie Grass in my field, I cut off a dry popple stake, one inch in diameter, which had been sticking in the ground after it had been laid off for a ditch. I am of the opinion that it will cut wheat well, where it is so much lodged, or so foul with stiff weeds or corn stalks, that it cannot be cut with any other machine I have seen in this country. Some of my neighbors say they intend to have Mr. Hussey's Reaper in preference to any other; and from what I can learn, this opinion is pretty general in my neighborhood, amongst those who have seen this machine work, and are acquainted with other machines. My brother farmers have had great trouble with McCormick's machine, by the breaking of sickles, and the great difficulty or rather the impossibility of getting them repaired, or getting new ones made when broken, whereas the blades of Mr. Hussey's machine can be made by any common blacksmith. I have no doubt but Mr. Hussey's machine will come into general use.

D. W. ANNIS.

Franklin Precinct, DeKalb Co., Aug. 13, 1849.

This may certify that we have seen Mr. O. Hussey's machine cut about an acre of wheat, so badly lodged that McCormick's Reaper could do nothing with it, nor could it be cradled. Said Hussey's machine cut it handsomely, and laid it in very good bundles for binding.

JOHN SCHOOMAKER, DANIEL MILLER,
ALBERT FIELD, ALBERT FIELD, Jr.,
JOHN M. SCHOOMAKER, ISAAC CRILL,
JOHN MILLER.

Berkshire, Kane county, Ill., Aug. 6, 1849.

We, the undersigned, having seen Mr. Hussey's Reaper work at cutting grass and grain, think it preferable to McCormick's or any other machine that we have seen. It cut wheat that could not be cut with McCormick's Reaper or a cradle. We are well acquainted with McCormick's machine.

P. A. HIXBY, DAVID SHANKS,
JOHN GRIGGS, Jr., ABRAHAM SHIRWOOD,
JOHN GRIGGS, JAMES HESS,
HARRY POTTER, ALSON BANKER,
JOHN SHIRWOOD, D. C. WRIGHT,
SETH SHIRWOOD, ELISHA WRIGHT.

Oswego, Ill., Aug. 2, 1849.

This may certify that I cut a lot of Black Sea Wheat with Mr. O. Hussey's Reaper: the wheat was so badly lodged that no McCormick Reaper or Cradle could cut it; Mr. Hussey's Reaper cut it clean and laid the bundles out of the track in good order for binding. I have seen the work done by this machine in grass: it was as good work as eve

I saw done by a scythe, or better. For my choice I should rather have my grass cut by the Reaper than by the scythe. Every farmer ought to have such a machine, and every farmer I hear talk about it says the same. PHILIP YOUNG.

Sugar Grove, August 9, 1849.

This may certify that we have seen Mr. O. Hussey's machine operate in clean grain, and where weeds were very tall, large and thick. In the former, it operated as well as any machine we have seen; in the latter, it worked to a charm, even where it was impracticable to cut with one of McCormick's Reapers.

HARRY WHITE, HIRAM TUBS,
L. B. SNOW, DWIGHT SPENCER,
CHAUNCY SNOW, SAMUEL WARD,
SULLIVAN DORR, A. LOGAN.

Springfield, Illinois, Dec. 25, 1850.

Mr. Obed Hussey, Baltimore, Md.—Dear Sir: I have used one of your Mowing and Reaping Machines, and consider it the best machine I ever saw, and never intend to do without one, if it is possible to get one, even if I have to go to Baltimore and remain at the shop till one can be made. I do candidly believe, if I had had one ten years ago, I would now feel like a much younger man, and cheerfully recommend them to all who have grass or grain to cut, as a machine that will do their work in perfect order, neatness, and with ease to all employed. JOHN SIMMS,
4 miles west of Springfield, Ill.

Utica, Lasal Co., Ill., Dec. 14, 1850.

Obed Hussey, Esq.—Dear Sir: I received your Reaping and Mowing Machine in time for harvest, and used it for harvesting and for mowing. I am fully satisfied that your Machines are the best yet offered to the farmers of this State. I have mowed about four hundred acres, a great portion of which was wild prairie, very frequently running against stones and ant heaps with sufficient force to throw both driver and raker off the machine, without injury to the machine. Why your machine is preferable to any other, is: after you have cut your different kinds of grain, fully as well as can be done with any other machine, with not over fifteen minutes' work, you can take the same machine into your meadow or on to the prairie, and cut your grass at the rate of ten acres per day, cutting closer and cleaner than can be done with a scythe. With proper care your machines will last fifteen or twenty years, with trifling repairs.
Respectfully yours, JAMES CLARK.

Island Grove, Sangamon Co., Illinois, Dec. 25, 1850.

Mr. Obed Hussey, Baltimore, Md.—Dear Sir: Last summer I received two of Hussey's Mowing and Reaping Machines; one from your own shop in Baltimore, and the other manufactured in this State. Unfortunately for me, I retained the one manufactured in this State, and with some difficulty succeeded in cutting about two hundred acres of wheat and grass. The one from your shop I let Mr. John Simms have, who cut his wheat, oats and hay, (about seventy-five acres) with perfect satisfaction and ease, most of it with two horses, and without being obliged to grind the knives. After Mr. Simms finished his harvest, he let Mr. James D. Smith, of Island Grove, have it, who cut about three hundred acres of grass with it, the machine giving perfect satisfaction.
Very respectfully yours, EDWARD J. ENO.

Carrolton, Green Co., Ill., Dec. 27, 1850.

I procured one of Mr. Hussey's Reaping and Mowing Machines from Baltimore, last spring; I cut eighty acres of wheat and ten acres of oats and fifty acres of timothy with it, to my entire satisfaction; after which, I cut sixty acres of clover seed with it in less than five days. I could not have saved the clover seed without the machine, so I consider I saved the whole cost of the machine, in the saving of the clover seed alone. SAMUEL THOMAS.

Springfield, Ill., Dec. 25, 1850.

Mr. Obed Hussey, Baltimore, Md.—Dear Sir: During the harvest of August, 1849, with one of your Machines I cut sixty acres of Hemp, using a set of 4½ feet knives and guards, and two teams of four horses each, changing every two rounds, which cut, on an average, eight acres per day. This last harvest, the same single machine, with 6 foot guides and knives, operated by the same force, cut successfully 250 acres of hemp, or from 10 to 12 acres per day. From this experience, I take pleasure in recommending your Cutters above the hemp cradle and hook, not only as labor-saving, by the expedition with which they cut, but as hemp saving, from the perfect thoroughness, evenness and nearness to the ground with which they do their work, and the regular and collected form in which they leave the hemp after being cut. Yours respectfully,
EDWARD S. COX.

Carrolton, Lebanon Co., Ill., Sept. 1850.

Mr. O. Hussey: The four Reaping and Mowing Machines you sent, arrived safe and in good order. Their performance far exceeded our expectations - the work went on so smoothly that we scarcely knew it was hay time and harvest. * * * If your machine had been as well known as they are now, you could have sold twenty as well as one.
May1 Yours, JONAS WARD.

AGRICULTURAL IMPLEMENT DEPOT
And Produce Store,
No. 95 LIGHT STREET WHARF,

And in front of the small wharf where the Hugh Jenkins, Cambridge and other steamboats start from daily.

TO facilitate and render this business more convenient for his customers and himself, the subscriber has taken a convenient and commodious Warehouse in Baltimore, as a depot and sale place for all the various Agricultural Implements manufactured at his shops in Carroll County; also, to sell the products of his Farms, Mill and Foundry.

The following articles of his own manufacture and produce, he will endeavor constantly to have there for sale, viz:

HORSE POWERS { Endless Chain or Tread, for 1, 2 or 3 horses. Levers or 2, 4 or 6 horses.

THRESHERS { With Seperator and Fan attached. With Seperator only. Without Seperator.

Wheat Fans, Corn and Cob Crushers, Corn Shellers of various kinds, (very superior;) Cutters for Hay, Straw and Fodder, (Richardson's patent;) Cornstalk Cutter and Grinder, (a new and the best article now in use;) Horse Rakes; Smut and Garlic Rubbers, (which is unequalled for its simplicity of structure and thorough operation on Wheat or Buckwheat;) Clover Seed Hullers; Ploughs of several kinds, but only such as are known to do the best work; Harrows and Cultivators, and various smaller Implements for Garden and Field use.

Will be received in a short time a supply of Mumma's patent CONCAVE CYLINDER CORN SHELLERS, either for power or hand. It received at the late Fair in Balt. the first premium over all others. The peculiar structure of the Cylinder, allows it to take the end grains off the cob cleaner than any other machine, also separating the shelled corn and cobs. I have the entire right for Carroll and Baltimore Counties and city. I will also furnish to right holders, these machines at wholesale, put up in a superior manner, and at fair rates.—I have also the Vertical Cylinder Corn Shellers, (all cast Iron and of great strength) which will shell 100 bushels per hour.

The subscriber would now respectfully call prompt attention to the securing for the ensuing harvest, (which promises to be very heavy) a Horse Power and Threshing Machine, either with or without Cleaner, which for *simplicity* of arrangement, *superior* structure and materials, and *cheapness* of price, have never been equalled in this market.

Having myself had long practical experience as a farmer, added to my country facilities of *best wood, water power for saw mill*, and shops and foundry, &c., the best and cheapest accommodation for workmen and their families, I am thus enabled to furnish our articles, of every kind, on terms to suit the low prices of produce. I am now getting ready a stock of implements of almost every kind used by the best farmers, which they will find here, or they can be sent on from my Factory, at short notice.

N. B. Address me in Baltimore, or at my residence, New Windsor, Carroll Co., Md.
May 1 JAS. C. ATLEE.

To Farmers and Planters.

GUANO—GUANO—GUANO.—We are now receiving our supply of Guano, per ships Greyhound and Brooklyn, just arrived direct from Peru. This Guano is fresh weighed and inspected, and warranted pure and free from stone and other impurities.

We offer it in *any* quantities at as low prices, (greatly reduced from those of last season) and on as favorable terms as can be obtained in the city.—A liberal allowance made to clubs and parties buying to sell again.

P. MALCOM & CO.
Grain, Flour and Guano Warehouses,
Corner of Bowly's wharf and Wood st., Baltimore.

P. S. We have also constantly on hand Ground Plaster in bbls., Bone Dust and Lime.
Baltimore, 1851. mar 1

Farmers and Planters' Agency.

FROM the suggestions of a Pautuxent Planter, the undersigned has been induced to undertake the sale of all kinds of PRODUCE raised by the farmer, believing it to be the best plan that could be devised for the farming interest, and having an experience of several years in that kind of business, he flatters himself to be able to give general satisfaction, if prompt attention to business, good sales and quick returns can do it. For further information, he would refer to Jas. Patterson, & Co., Calvert street; E. Whitman, Jr. Light street; Godwin & Seth, Bowly's wharf.

WM. L. BATEMAN,
May 1. No. 61 south Calvert street.

Farmer's Agency and Commission House.

THE difficulty which farmers have heretofore experienced in getting into market many profitable articles of produce; as Poultry, Butter, Eggs, Vegetables, Fruits, &c., is now entirely removed by the establishment of an agency for the sale of ALL articles raised by the farmer.

This arrangement must prove advantageous to the producer, enabling him to obtain a remunerative price for his goods, instead of the meagre rates heretofore received through captains of vessels, who not having time to devote to them, were frequently compelled to sacrifice the interests of their owners. The undersigned having established such a house, refer the community to Messrs. Popplein and Thomsen, Mr. J. N. Palmer, Mr. Ezra Whitman, Jr., and Samuel Sands, Esq.—*Baltimore.*

All goods consigned to us will meet with prompt returns. LARKIN & CO.
Ap. 1 *No.* 43 *S. Frederick st., Baltimore.*

BOOKBINDING.

WILLIAM C. LYCETT, No. 125 BALTIMORE-ST., Opposite the American Farmer office,

WILL execute all orders in the above business with promptness, in a neat and substantial manner, and in every variety of style, in full or half bound Tur. Morocco, Russia, Calf, Sheep or Muslin at the lowest possible rates, such as Bibles, Magazines, Music and old Books carefully mended or re-bound. Feb. 1-eoly

GUANO! GUANO!!

THE subscribers offer for sale, in lots to suit, FOUR HUNDRED TONS *PERUVIAN GUANO*, of the cargoes of barque E. H. Chapin and ships Albany and Angelique. This Guano is all of the present season's importation and inspection, warranted pure, and is handsomely put up in white cotton bags.

PATAGONIAN GUANO, very dry, imported in barques Corvo and Mary Franceska, just inspected.

They warrant the purity of all Guano passing through their hands, and as their prices are uniform, and every attention is given to its proper shipment, farmers can do as well by ordering, as though they purchased in person.

KETTLEWELL'S AGRICULTURAL RENOVATOR.
Prime TIMOTHY and CLOVER SEED.
GROUND PLASTER, &c. W. WHITELOCK & CO.
mar1-2t corner of Gay and High streets.

GUANO! GUANO!!

1200 TONS PERUVIAN GUANO, landing from ships Edward Everett and Medford.

500 tons Patagonian, part equal to any ever imported into the United States. Also, 1000 bbls. Baltimore city ground Plaster. For sale on the best terms, by

S. FENBY & BRO.,
Mar. 1. Corner of Gay and Pratt sts. Baltimore.

A. E. WARNER, No. 10 N. Gay st.

MANUFACTURER OF SILVER WARE, FINE GOLD JEWELRY, and importer of BEST SILVER WARE, FANCY ARTICLES, &c. would respectfully invite the attention of those in want of any of the above articles, that he keeps always on hand, and makes to order, every variety of Silver Ware, fine Gold Jewelry, and best quality Silver Plated Ware, which he will sell on the most accommodating terms. Feb. 1-tf

A. G. MOTT,

AGRICULTURAL IMPLEMENT MANUFACTURER,

No. 38 *Eutaw street*, near the Belair Market, Baltimore. Plows, Cultivators, Harrows, Wheat Fans, Straw Cutters, Grain Cradles, and all of the best and most approved Agricultural Implements in use.

☞ AGENT for the celebrated N. York Wiley and Empire Plow Castings. mar1

AGRICULTURAL IMPLEMENTS.—LABOR SAVING MACHINERY.—*GEORGE PAGE*, Machinist & Manufacturer, Baltimore st. West of Schrœder st. Baltimore, is now prepared to supply Agriculturists and all others in want of Agricultural and Labor-saving MACHINERY, with any thing in his line. He can furnish Portable Saw Mills to go by steam, horse or water power; Lumber Wheels; Horse Powers of various sizes, ranging in price from $85 to $200, and each simple, strong and powerful. His *Horse Power & Thrashing Machine*, he is prepared to supply at the low price of $125 complete; the Thrashing Machines without the horse power, according to size, at $30, 40, 65 and $75; Improved Seed and Corn Planter Portable Tobacco Press; Portable Grist Mills complete, $165

Caution against Piracies on PAGE'S CIRCULAR SAW MILL

HAVING been informed that certain persons, without any authority from me, have been manufacturing my *Improved Portable Patent Circular Saw Mills*, and fraudulently selling the same to divers persons, *for use in the States of North Carolina, South Carolina, Georgia, Alabama, Louisiana, Florida, Texas, Mississippi, Kentucky, Ohio* and *Pennsylvania*, this is to caution all persons residents of said States, from purchasing said Mills from any other person than myself for use in either of the before mentioned States, as I shall prosecute all such offenders. My agents will forthwith report the names and residences of all such offenders to me, as I may take measures to prosecute them.

GEORGE PAGE, Inventor,
Patentee and Manufacturer.
Baltimore, Md., April 1, 1851. Ap. 1

CHICKERING'S PIANOS.

THE Subscriber is *Sole Agent in Baltimore*, for the sale of CHICKERING'S CELEBRATED IRON FRAMED GRAND AND SQUARE PIANO FORTES, and is constantly receiving supplies from the factory in Boston, which are sold at the same prices as charged by Mr. Chickering.

Chickering's Pianos are unquestionably the best Instruments manufactured in the United States. In regard to superior quality of tone, touch, durability, and all the essential qualities of a Piano, they are admitted by the most eminent Pianists to be equal to Erard's, of Paris, or Broadwood's, of London.—Although there are several factories in Boston and New York of high reputation, Mr. Chickering undoubtedly stands at the head, possing eminent talent, skill, untiring industry and experience of some 35 years as a manufacturer of pianos, with abundant means to enable him to carry out his plans in producing the very best instruments.

Orders from the country, untrusted to the subscriber, either for Pianos, Music, or any article in his line of business, will be faithfully executed. F. D. BENTEEN,
jan1 6t* 181 Baltimore street.

JAMES BAYNES, Wool Dealer,

Warehouse No. 105 *Lombard st. near Calvert, Balto.*

IS prepared at all times to give a fair market price for WOOL of all descriptions. He would recommend to farmers to be more particular in washing their Wool, and in getting it in good order before bringing it to market, to ensure them a fair price. The demand is good, and the probability is, that it will continue so the coming season. Those having wool to dispose of, are invited to give him a call before disposing of their fleeces. Any information as to putting it up for market, &c. will be freely given.

References—B. Deford & Co., and Wethered Brothers, Baltimore—Jas. Mott & Co., and Houston & Robinson, Philadelphia. Ap. 1-1yr

Oil Vitriol, or Sulphuric Acid.

THE undersigned, being largely engaged in the Manufacture of *Oil of Vitriol*, is prepared to furnish it to farmers for *dissolving bones*, put up in strong Carboys, at lowest price for cash or town acceptances.

P. S CHAPPELL.
Feb. 1-tf. No. 158 Lombard street.

PIGS—By Russian Boar and Chester Sow.
Do By Leicestershire Sow and same Boar. For sale at $10 per pair by EMORY WOOLFORD,
May 1 At Sinclair & Co's.

FRESH ENGLISH GARDEN & FLOWER SEED.

SAMUEL FEAST & SONS' usual supply of Fresh English Garden and Flower SEED, has arrived, consisting, in part, of Prince Albert Pea, Early Surprise do., London Market Cabbage, Preston's Victoria do., Victoria Brocoli, Lion's Paw Celery, Yellow Turnip Radish, 10 wks stocks extra large Pansy, Asters, &c., which they offer to customers at reduced prices, with a large collection of Roses, &c. of every variety—at their Exotic Nursery and Seed Store, corner Charles and Saratoga streets, Baltimore.

Also, to arrive by ship Geo. Washington, from England, about the 1st April, 217 barrels of English Potatoes, viz:

Early Axhidge Kidney,
" Ash leaf "
" Fox's Seedling,
" Manley's,
" Pinkey's Kemp,
Late Regent,
" Lancashire Kemp,

Samples can be seen at the office of the American Farmer.

Ap. 1

PUBLIC SALE OF VALUABLE LAND.

HAVING moved from Maryland, I will offer on TUESDAY, 13th of May, 1851, my farm called "Boston," containing 320 Acres, more or less, lying and being in Talbot county, on the Choptank river, at the mouth of Dividing creek. This farm has a large brick Dwelling house with 11 rooms,—a Kitchen, Milk and Poultry house, all convenient to the dwelling. Barns, Stables, Corn house, Carriage house and Cattle shed. A small choice Apple and Peach orchard; a garden containing the usual herbs and shrubbery, with fine drinking water convenient to the dwelling.—The farm can be advantageously divided in three parts, each having a good location for a dwelling, with water views and ample Woods. This farm has produced as fine crops as most Maryland lands; will throw up the richest grass, has superabundance of calcareous and other manures, has the Locust, Sassafras, Wild Cherry, and Slippery Elm trees, growing in groves along the creek shores. Those who desire to locate themselves on the salt water, in a pleasant and healthy neighborhood, abounding in oysters, fish, terrapins, and crabs, with wild fowl and other game in their season, and accessible to Baltimore at least three times a week, per steamboat passing in sight and landing passengers within 1 to 1½ miles of the door, may not again have as favorable an opportunity to fix themselves on the salt water.

The terms of sale are one half cash, and the balance in 6, 12 and 18 months credit, with approved security, bearing interest from the day of sale.

N. B.—For any particulars, address the subscriber, post paid, or James L. Martin, Esq., Easton. Thomas O. Martin who resides on the farm, will show the premises.

MARTIN GOLDSBOROUGH,
Tallahassee, Florida, Feb. 11, 1851. Mar. 1.

P. S.—The above land will be offered in three farms, and as it is rented for this year, the purchasers will have the privilege of seeding at the usual time.

☞Papers which have published the advertisement, will add this P. S.

LIME—LIME.

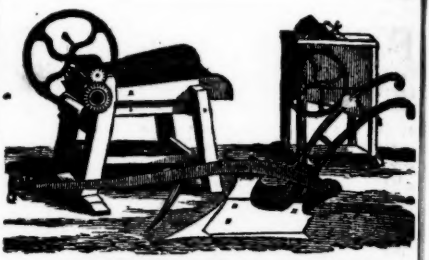
THE undersigned having purchased of E. J. Cooper the most extensive Lime Burning Establishment in the State, is now prepared to supply Agricultural and Building LIME, of superior quality, to farmers and others, on accommodating terms, from his Yard, at the *City Block*, or delivered at the several landings on the Chesapeake Bay and its tributaries, and pledges himself by strict attention and punctuality, and a determination to do justice, to merit a liberal share of patronage. Any orders addressed to him through the Baltimore Post Office, or left with C. W. Burgess & Co., No. 60 South street, one door above Pratt, will be promptly attended to.

Feb. 1-1y* JAMES L. SUTTON.

Report of Dr. James Higgins,

STATE AGRICULTURAL CHEMIST.

For sale at this office—Price 15 cts.



SELLING OFF TO CLOSE!

A STOCK OF

AGRICULTURAL IMPLEMENTS

Amounting to $10,000,

TO BE SOLD AT GREAT SACRIFICE.

THE undersigned having determined to change their entire business, would call the attention of Farmers, Gardeners and Dealers, to their extensive stock of Agricultural Implements, which they will dispose of on the most reasonable terms for cash, with a desire of a speedy close.

The Implements consist, in part, of Horse Powers and Thrashers; Wheat Fans, a superior article—took the First Premium at the late annual Fair; Straw Cutters, various kinds and sizes, consisting of Cylindrical Box, which is too well known for us to speak further—the Raw Hide Repeating, or the Boston Box, suitable for cutting straw or hay; Corn Shellers of all kinds; Ploughs of every kind, suited for the different varieties of soil. Our stock of the latter is very large, numbering upwards of 600, which we will close out at much reduced rates. Also, Churns of an endless variety, with Shovels, Forks, Cradles, Briar Hooks, Apple Pearers, Sausage Cutters and Fillers, together with a general assortment of articles suited for the farmer. Home Seeds from the Shakers' Gardens, N. York, celebrated for their freshness, &c.

We will also dispose of an elegant STEAM ENGINE, Turning Lathes, Circular Saws, Drilling Machines—together with an elegant Brick Shop, making everything complete for manufacturing purposes. The agricultural community will please give us a call before purchasing elsewhere.

No. 97 NORTH PACA ST., near Franklin.

For the accommodation of those having water communication with the city, we will have an office on BALDERSTON STREET, near Light, where we will be happy to receive all orders, and promise to give punctual attention.

mar 1 HAMBLETON & DIDIER.

SEEDS, TREES, PLANTS, &c.

JOHN FEAST,

Florist and Seedsman,

279 *W. Lexington st., cor. of Pine, Balto.*

Offers for sale on the most reasonable terms, a large collection of GREENHOUSE PLANTS, as Camellias, Roses, Azaleas, Geraniums, Fuchias, and new Verbenas; also the newest and best Dahlias, of superior beauty and form, which have taken prizes wherever shown last year. Also, FRUIT and ORNAMENTAL TREES and PLANTS, Shrubbery, Bulbous Roots, Herbaceous Plants, and Creepers, Grape Vines of the best sorts, Sea Kale Roots, Victoria Rhubarb, Cabbage, Cauliflower, Brocoli, Tomatoes, Egg Plants, and all others in season for planting.

Cut Flowers for parties, or *Boquets*, to order.

He has always on hand a choice stock of GARDEN and FLOWER SEEDS, imported and home growth, which will be found, on trial, to be genuine—and he invites those wanting seeds to call on him, where they may depend on obtaining articles in which they will meet with no disappointment, and on the lowest terms for cash or satisfactory references.

☞ *Gardeners furnished* to those wanting them. Feb. 1 4t

BONE-DUST AND POUDRETTE ESTABLISHMENT.

On Harris' Creek, at Canton, Baltimore.

THOMAS BAYNES, continues the manufacture of *POUDRETTE*, and is prepared to supply any orders for the same—The article manufactured by him, will be found probably more valuable than any made in the Eastern cities. His *BONE-DUST* weighs from 55 to 60 lbs. to the bushel, and is as fine as any article sold in this market. Price of Bone Dust, 60 cents per bushel. Poudrette, $1.12 per barrel. Persons sending their carts or wagons to the factory, can obtain the Poudrette at 20 cents per bushel.

Orders left with S. Sands, at the office of the American Farmer, will be attended to.

LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster-sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with WILLIAM ROBINSON, No. 15 Hollingsworth-street, near Pratt.

ft **FELL & ROBINSON, City Block.**

DUVALL & IGLEHART,
GROCERS AND COMMISSION MERCHANTS,
No. 78 LIGHT STREET WHARF,

Invite the attention of their friends, and the public generally, to their large and general assortment of GROCERIES, embracing every *article* in that line of business, and which they will sell upon pleasing and liberal terms, and at the lowest prices. Any one in want of any article in their line will find it to their advantage to give them a call. *They will also pay particular attention to the sale of all kinds of produce.*

WEEDS—THEIR EXTIRPATION.—As the spring has infused vegetative life into the earth, and farmers may soon expect to see their fields and their crops infested with weeds, they should, one and all, form the firm and immovable resolution of exterminating them. Besides the absolute loss which they sustain, in the abstraction of the food by these intruders, which should be appropriated to the cultivated plants—besides the injury which they inflict by shade, and by the absorption of moisture—and besides the diminution in products—the appearance of those weeds never fail to make an unfavorable impression on the minds of others, against the farmers who permit their arable lands to be thus overrun.

Let none conclude, because weeds are numerous, that it is not in their power to destroy them, for a willing mind and determined will, can get the mastery of the most rampant—the most tenacious of the whole tribe—whether they be annual, biennial, or perennial. The most inveterate of them may be killed by being repeatedly cut off at the ground, or pulled up by the roots before they go to seed; for however tenacious of life their roots may be, however prompt they may be to obey the laws of reproduction, repeated deprivation of their leaves will, in the end, destroy their powers of vitality.

They must be vigorously attacked in the incipient stages of their vegetation, and these attacks must be repeated, as often in the season as they may show their heads. In this good work, whole neighborhoods must join heart and hand; each neighbor must encourage the other—all, for miles around, must be parties to the war of extermination. And none must despair, because it may take more than one season to effect the object in view; none must conclude, because they make their appearance the succeeding year, that they cannot be destroyed. Those which so make their appearance the second year, may, and doubtless are from seeds which are restored by the plough to the surface, which had been buried by the ploughing for the preceding crop beyond the depth of vegetation.

It might aid very materially in their destruction, on a field which had been infested by them the previous year, which was intended for a spring crop, to harrow early, encourage the germination of the seeds near the surface, in order, when the ground came to be ploughed for spring culture, that the weeds may have time to vegetate, and, by being turned under, contribute somewhat to fertilize the soil, and return to it a portion of the food of which they had robbed it. In ploughing for wheat, if time and force allowed, it would be good policy to give the land several ploughings, allowing intervals between each for the inverted seeds to start. By this means, a degree of cleansing would be effected, that would tell admirably in the exemption of the succeeding wheat crop from weeds, as well as in its increased product.

To the Editor of the American Farmer—

TIME OF SOWING SEEDS.—The following brief directions of time of sowing field seeds and quantity of seed sown per acre, is from our Agricultural Catalogue. It is a convenient reference, as nearly correct as possible for the latitude of Maryland.

In regard to quantities named per acre; we would rather recommend more seed than less, from the fact that ground not well covered with good grass seed, will either be destroyed by weeds and wild grasses, or the crop suffer by the mixture.

TABLE

SHOWING THE TIME OF SOWING SEEDS, AND QUANTITY REQUIRED FOR AN ACRE.

NAME OF SEEDS.	MARCH,	APRIL,	MAY,	JUNE,	AUGUST,	SEPT.	OCTOBER	ESTIMATE Of Seed usually sown on an acre of ground.
Clover, White	o	*			*	*		4 qts. } Dry
Red	o	*			*	*		6 qts. } Mea-
Timothy,	o	*			*	o		6a8 " } sure.
Orchard Grass,	o	*			*	o	*	2 to 3 bush.†
Herds Grass,	o	*			*	o	*	½ bushel.
Ky. Blue Grass,	o	*			*	o	*	1 to 1½ bush.
Mix'd lawn grass,	o	*			*	o	*	1 to 1½ bush.
Oat Grass,	o	*			*	o	*	2 bushels.
Vetches,	*	o			*	o		4 bushels.
Millet,		*	*	*	*			¼ to ¾ bush.†
St. Foin,								4 to 5 bush.
Tobacco,	o	*						2 oz.
Rye,	o	*			*	o		5 pecks.
Wheat,						o	*	1¼ to 2 bush.‡
Corn,		*	*				*	4 to 6 qts.
Broadcast		*	*		*			4 bushels.
Broom		*	*					½ bushel.
Buckwheat,					*			¾ bushel.
Lucerne,		o	*		o	*		30 lbs.§
Barley,	*	*						2 bushels.
Rye Grass,	o	*				o	*	1½ bushels
Oats,	*	o	*					2½ to 3 bush.
Irish								1½ or 3 bush.
Rape,	*	*			o	*		¾ bushel.
White Beans,		*	o	*				1½ bushels.
Field Peas,	o	*						2½ to 3 bush.
Mangel Wurzel,		o	*	*				4 lbs.
Sugar Beet,		o	*	*				4 lbs.
Carrot,		o	*					2 to 3 lbs.
Ruta Baga,				*	*			¾ lb.
Turnip, white						*	*	¾ lb.
Potatoes,	*	*	*			*	*	10 to 15 bush.

Time seeds may be planted marked thus *—best time, thus o.—Clover seed may be sown in Feb.—Vetches in July—Ruta Baga, best time in July.

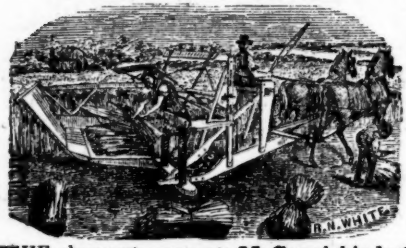
Orchard Grass will succeed better if sown with clover, which ripens at same time, and causes an improvement in quality of the hay and richness of the pasture. 2 bushels of the former, and ½ peck of the latter will be sufficient for an acre.

† If *seed* is the object, ¼ bushel per acre is enough.

‡ 1½ bush. is the usual quantity for drilled Wheat.

§ In this country, where labor is high and land cheap, the broadcast system for Lucerne is best. With each 30 lbs. sow lightly Oats or Rye, for a protection to the young plants. 15 lbs. per acre is enough on the drill system. R. SINCLAIR, jr. & Co.

M'CORMICK'S REAPER.



THE above cut represents **McCormick's last improved Patent Virginia Reaper**, which will be sold by E. WHITMAN, JR. & CO. (who are the sole agents in Baltimore) on the following terms: on delivery of Machine, Forty Dollars cash, and note with city endorser, for the further sum of Eighty-five Dollars, payable on the first day of November thereafter, with interest from the first day of July, 1851. Said Reaper is warranted to cut one and a half acres of wheat or other small grain per hour, and to save at least three-fourths of all the wheat scattered by ordinary cradling, to be well made, of good material and durable, with proper care; and that the raking of the wheat can be well done by a man riding upon the machine.

If upon a fair trial, to be made next harvest, said Reaper cannot perform as above specified, and shall not be as above represented, the undersigned will lay it aside, and store it safely, and re-deliver it to C. H. McCormick, subject to refunding the money and note above described. May 1

BAMBOROUGH'S WHEAT FAN.

HAVING purchased of Mr. John Bamborough the Patent Right of his celebrated Wheat Fan for the entire State of Maryland, with the privilege of selling in any of the Southern States, we are now engaged in manufacturing a large number of them in the most substantial manner. This Wheat Fan has received *thirty-five first Premiums* from the different Agricultural societies, and is now the most popular farming implement in the United States. Persons wishing to procure those celebrated Fans, are cautioned to be careful of whom they purchase, as their great popularity has induced some dishonest persons to offer for sale Wheat Fans purporting to be the same as Bamborough's, which are entirely a different and inferior article, otherwise we should not suffer them to be manufactured and sold in Maryland, as we are the sole owners of the patent right. Therefore, persons wishing to obtain the Bamborough Fan, will readily see that, if they purchase elsewhere, they either get an article which infringes upon our right, and are liable for damages, or else the article is not the genuine Bamborough Fan; and as we have paid liberally for this patent, we shall enforce the law in all cases of infringement, and we trust that the farmers and planters will see the justice of our course, and in purchasing these Fans will be governed accordingly.

This Wheat Fan having taken the First Premium at the Maryland State Fair, in 1849, and by a rule of the Society it could not come into competition for the premiums at the Fair held by the Society in 1850, said rule expressly declaring that, "no article which had previously taken the highest premium of the Society, could again become a competitor for a premium of the same grade,"—yet the Society, at the Fair in 1850, gave it a still higher honor in a certificate, of which the following is a true copy:

COPY.

This is to certify, that at the Third Annual Exhibition and Cattle Show of the Maryland State Agricultural Society, held at Baltimore the 25th of October, 1850, by the report of the Committee of Judges, JOHN BAMBOROUGH was declared to be entitled to a Certificate of Pre-eminence over the first premium offered by said Society, viz: for his *Fanning Mill*.

Signed, on behalf of the Society, this twenty-fifth day of October, 1850.

CHARLES B. CALVERT, *President.*
SAM'L. SANDS, *Secretary.*

This Certificate having been given as above, gave second or third rate Fans on the ground, an opportunity to claim a premium, which, by the established rules of the Society, could not be refused them.

Farmers and others would do well to remember this fact, as they might be imposed upon in the purchase of inferior Fans, in the supposition that they were considered by the Society as worthy of its highest honors.

☞ Prices $30, $32 and $34.

E. WHITMAN, JR. & CO.,
May 1 Baltimore.

Eddy's one Wheel Horse Power improved.

WE have had this Power greatly improved since last season by enlarging the main wheel and other important improvements, which renders it much lighter to the horses, and it has double the strength and durability. We can now recommend this as the most simple and durable Sweep Power in use, and only needs to be seen, to be acknowledged to be the lightest in draft of all Sweep Powers.

E. WHITMAN, JR., & CO.
may1 No. 55 Light street, Baltimore, Md.

Threshing Machines.

FARMERS in want of Whitman's improved Horse Powers and Threshing Machines, the coming season, will please forward their orders as early as possible, in order to secure machines at the time they may be wanted.

We are manufacturing and will offer for sale this season 250 of Premium, a great portion of which are already engaged.

E. WHITMAN, JR. & CO.,
may1 No. 55 Light street, Baltimore, Md.

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